Quantifying the error in EQC introduced by not including aluminium buffering in the conversion of ANC to pH

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Executive Summary:

A fundamental strength of the revised Environmental Quality Criteria is the coupling of water chemistry to biological response. Since pH the chemical property that best describes biological response, the classification of human influence is made in terms of changes in pH. Useful as this is in connecting chemistry to biology, the use of pH as the main chemical indicator presents a major operational challenge. Tying the acidification EQC to pH requires the ability to convert between ANC and pH. That conversion is dependent on the buffering systems that are present in water. There are three such systems of interest in Swedish surface waters, the bicarbonate system, organic acids and aluminum hydrolysis. The bicarbonate system is well defined. It was more recently that the organic acid system has been quantified. The ability to reliably and accurately define the buffering of organic acids made it possible to consider an acidification assessment system based on changes in pH. Aluminum buffering, however was not explicitly considered.

This report has evaluated the influence this has had on the conversion of changes in ANC to a 0.4 pH unit change as used in the EQC. The most important result is that estimate of the ANC needed to reduce pH by 0.4 units is not significantly affected (an error of 0.1 pH units) in the weakly buffered pH range between pH 5 and 6 when Al concentrations are changed. In this region small changes in ANC will lead to a large pH drop and a high precision in the prediction of pH changes are vital. Here both models predict equal pH changes. What little affect increasing Al between the pre-industrial and present time has is to overestimate the pH drop associated with a given ANC decline. This means that the EQC will err on the side of overestimating human influence.

In the well buffered region of pH above 6.5, on the other hand, differences do occur. In that pH range, Samples with higher total aluminium concentrations than the average sample population need to be treated individually using the buffering curves in the annex.

1) Differences in buffering response below pH 6.2 are always below 0.05 pH units irrespective of the TOC and Al concentration. This implies that samples with a pre-industrial pH of 6.2 or lower may safely be evaluated using the Swedish 3-pKa model. In the appendix three such calculations are given (C through E) where it is assumed that the sample has now a pH of 5.7 (5.0, 4.4) and a pre-industrial pH of 6.1 (5.4, 4.9).
2) Significant differences occur from pH 6.3 upwards when TOC is larger than 5.0 ppm. The results imply that the buffering of samples with TOC larger than 5 ppm is overestimated when using the Swedish 3-pKa model. As described in the discussion section we suggest accounting for this by increasing the pH difference with 0.1 pH units. This observation applies for all surface waters with a pre-industrial pH of 6.7 or higher and a TOC of 5 ppm or higher. In the appendix one calculation is given where it is assumed that the sample has now a pH 6.5 and a pre-industrial pH of 6.9.

Introduction

A fundamental strength of the revised Environmental Quality Criteria is the coupling of water chemistry to biological response. Extensive analysis of biological data revealed that pH was the chemical property that best described biological response. Thus the classification of human influence is made in terms of changes in pH.

Useful as this is in connecting chemistry to biology, the use of pH as the main chemical indicator presents a major operational challenge. Hydrochemical models are best at predicting changes in chemical properties that are more conservative than pH (e.g. base cations or acid anions). That has been a major reason why alkalinity and Acid Neutralizing Capacity have been used so extensively in acidification assessment and the calculation of critical loads. Tying the acidification EQC to pH requires the ability to convert between ANC and pH. That conversion is dependent on the buffering systems that are present in water. There are three such systems of interest in Swedish surface waters, the bicarbonate system, organic acids and aluminum hydrolysis. The bicarbonate system is well defined. It was more recently that the organic acid system has been quantified. Work by Köhler and his collaborators succeeded in demonstrating that the organic acid system in Sweden can be approximated quite reliably. The ability to reliably and accurately define the buffering of organic acids made it possible to consider an acidification assessment system based on changes in pH.

For many Swedish surface waters, the third buffering system, aluminum may safely be neglected in the conversion of ANC/alkalinity to pH. At the more acid end of the pH range in natural waters, however, aluminum may contribute significantly to the overall buffering. This creates a systematic error in converting pH to ANC if aluminum is not explicitly accounted for. There were two major considerations in not including the Al buffering in the equations that the proposed EQC use to convert pH to Al. The first was the lack of a simple operational method to account for the aluminum buffering. The second consideration was that not accounting for aluminum means that the human influence will be over-estimated in these low pH waters (i.e. the pH change predicted by EQC as ANC declines due to human influence will be larger than is actually the case.) This type of error was seen as acceptable, especially given the lack of an operational alternative. No quantification, however, has been made of the error introduced into EQC by not accounting for Al buffering when converting ANC to pH. Recent advances in the modeling of Al speciation in a large data set of Swedish surface waters by Cory and co-authors (with support from the Swedish EPA), now opens up the possibility for quantifying the effects of Al on the accuracy and reliability of EQC.

This project aims to:

1. Quantify the error in EQC introduced by not including aluminum buffering in the conversion of ANC to pH.
2. Comparison of the error in pH with the Al concentration to investigate whether the pH decline in the simple model without Al is approximately equivalent to the increase in total acidity (H^+ + Ali).
3. Define the potential for reducing this error by incorporating the Al models developed during the last two years for Swedish surface waters

Summary of buffering reactions in surface waters

Proton buffering in the dissolved fraction of aerobic surface waters with pH below 8 is quantitatively controlled by the five buffering systems: bicarbonate, organic acids, aluminum, iron and colloids.
The two most important buffering reactions in surface waters are the protonation of the bicarbonate ion and the proton uptake of organic acids as exemplified for carbonic acid and a triprotic analogue model :

$$HCO_3^- + H^+ \rightarrow H_2CO_3 \quad \text{(eq. 1)}$$

$$H_3A \rightarrow H_2A^- + H^+ \rightarrow HA_2^{2-} + 2H^+ \rightarrow A^{3-} + 3H^+ \quad \text{(eq. 2)}$$

Iron and colloids do not contribute significantly to the observed buffering in circumneutral and slightly acidic waters. At pH below 5 the contribution of aluminium may become significant. The presence of either readily exchangeable aluminium on soil particles or a soluble aluminium containing mineral (often gibbsite) in soils may lead to increased concentrations of aluminium with decreasing pH. As aluminium is complexed by organic matter, total aluminium concentration also increases with TOC.
For the purpose of illustration of the chemical equilibria involved in the conversion of ANC and pH in waters containing significant amounts of aluminium we shortly discuss a conceptual model presented by Driscoll et al. [1] (Driscoll et al., 1994). Besides the usual hydrolysis reactions of water, carbonic acid (eq. 1), a tripotic organic acid model (eq. 2) and aluminium the authors propose the two following complexation reactions between the triprotic organic acid analogue and aluminium:

$$Al^{3+} + A^{3-} \rightarrow AlA \quad \text{(eq. 3)}$$

$$Al^{3+} + H^+ + A^{3-} \rightarrow AlHA^+ \quad \text{(eq. 4)}$$

Choosing the ANC reference conditions at a pH around 5, the following four aqueous species are considered neutral with respect to the ANC definition: $Al(OH)^{2+}$, H_2CO_3, H_2A and $AlHA^+$. Acid neutralizing capacity is then composed of the water hydrolysis, carbonic acid and organic acid equilibria, aluminium hydrolysis and aluminium organic acid complexation :

$$ANC_W = [OH^-] - [H^+] \quad \text{(eq. 5)}$$

$$ANC_C = [HCO_3^-] + 2[CO_3^{2-}] \quad \text{(eq. 6)}$$

$$ANC_A = [HA^{2-}] + 2[A^{3-}] - [H_3A] \quad \text{(eq. 7)}$$

$$ANC_{AlA} = [AlA] \quad \text{(eq. 8)}$$

$$ANC_{Ali} = [Al(OH)_2^+] + 3[Al(OH)_4^-] - [Al^{3+}] \quad \text{(eq. 9)}$$

The total acid neutralizing capacity is thus the sum of the five identified subsystems :

[1] This model was implemented in PhreeQC (Parkhurst 1998) and the input file is presented in the annex.

$$ANC_T = ANC_w + ANC_C + ANC_{Ali} + ANC_{AlA} + ANC_A \quad \text{(eq. 10)}$$

$$ANC_T = C_{base} - C_{acid} \quad \text{(eq. 11)}$$

From the above set of equations it is evident that the degree of complexation of aluminium changes both with pH and content of organic matter. Only inorganic aluminium will contribute to aluminium buffering according to eq. 9 while organically bound aluminium (here $AlHA^+$) will not. The degree of complexation of organic matter with aluminium in turn will change the buffering behaviour of the organic acids. The quantitative modelling of buffering (eq. 10) of acidic surface waters should thus require a complete equilibrium description of aluminium hydrolysis and aluminium complexation.

The Swedish 3-pKa model was not derived from equation 11 but was instead calibrated against measured end-point alkalinity, a true measure of acid buffering. This implies that observed buffering was fitted to a triprotic model accounting for the buffering reactions of equations 5 through 7. As possible buffering reactions caused by aluminium buffering in equation 8 and 9 were not explicitly included their effective contribution in turn is included in the overall buffering of the 3-pKa model. The Swedish 3-pKa model is thus not a set of deprotonation reactions of a triprotic acid but instead reproduces the average observed buffering reaction as a function of pH in Swedish surface waters not accounted for in equation 5 through 7. The concentration of organic anions represent the amount of buffering present in the water sample that is not due to the buffering in equations 5 and 6.

Complexation equilibria and buffering reactions in natural waters are often a lot more complex and a series of other approaches have been published. In this report we chose to use the model WHAM VI (Tipping and Hurley, 1992) as it was explicitly developed do describe Al-TOC interactions, contains all relevant aluminium equilibria and has already been successfully calibrated for Swedish surface waters (Köhler et al., 1999; Köhler et al., 2002, Cory et al. 2004). While the number of relevant equilibria that are solved simultaneously are much higher in WHAM IV, the problem of quantifying proton buffering due to shifting equilibria is the same.

The Ecological quality criteria of the Swedish EPA and conversion of pH and ANC

The buffering concept for the evaluation of the acidity status of surface waters in the Swedish environmental protection agency uses the buffering described in equations 5, 6 and 7. These equations relate pH and ANC and given the partial pressure of CO_2 and concentrations of dissolved organic carbon (DOC) conversion calculations are possible.

$$ANC = OH^- + HCO_3^- + 2\,CO_3^{2-} + RCOO^- - H^+ \quad \text{(eq. 12)}$$

$$RCOO^- = [H_2A^-] + 2[HA^{2-}] + 3[A^{3-}] \quad \text{(eq. 13)}$$

The site density is assumed to be distributed equally among the three putative acid functional groups. For modeling purposes, the tri-protic model can be rearranged to predict organic acid anion concentrations and charge density as a function of pH, site density, the pK_a values, and DOC:

$$\left[RCOO^-\right] = \alpha_1 \frac{H_3A_{tot}}{3} + 2\alpha_2 \frac{H_3A_{tot}}{3} + 3\alpha_3 \frac{H_3A_{tot}}{3} \quad \text{(eq. 14)}$$

$$\alpha_i = \frac{\left[H_{3-i}A^{i-}\right]}{\left[H_3A_{tot}\right]} = \frac{K_{ai}\left[H_{3-i+1}A^{i-1}\right]}{\left[H\right]^i} \qquad \text{(eq. 15)}$$

$$\left[H_3A_{tot}\right] = \textbf{site density m} * \left[TOC\right] \qquad \text{(eq.16)}$$

where m is the site density (moles of sites per mg of total carbon), and α_1, α_2, and α_3 are the ionization fractions for a tri-protic acid with K_{a1}, K_{a2} and K_{a3}. With the last five equations it is possible to calculate the buffering capacity over a given pH interval of a given water sample from TOC, pCO_2 and initial pH or do the inverse, predict a pH change given TOC, pCO_2 and a change in ANC through iteration, a nomogram or a lookup table. This is schematically displayed in a figure below.

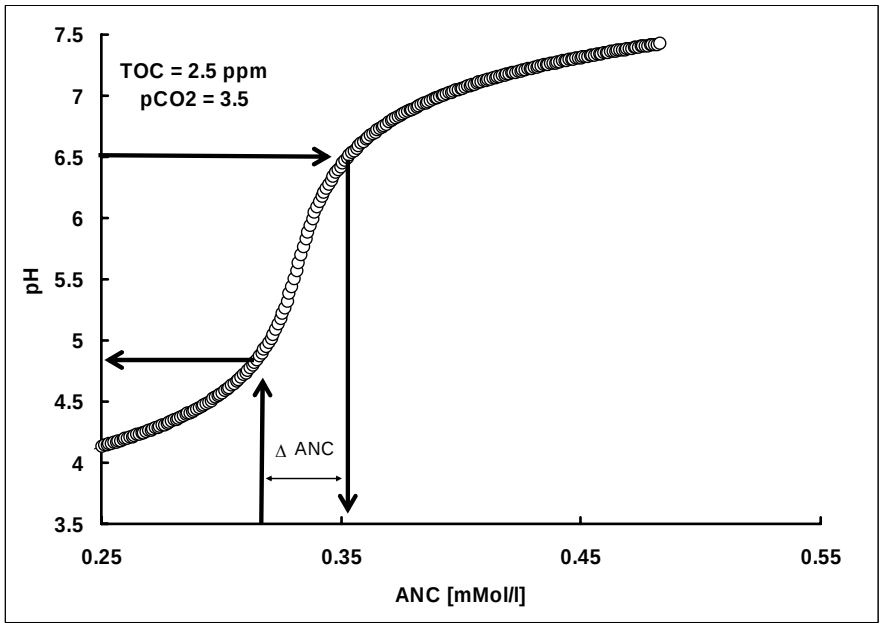

Figure 1: Graphical representation of the acid buffering capacity of a sample containing 2.5 ppm TOC in equilibrium with atmospheric carbon dioxide.

Predicting average aluminium concentrations from pH and TOC

From the above discussion it becomes clear that total aluminum concentrations are a function of both pH and DOC. During acidification periods in streams and lakes one must distinguish between the instantaneous buffering of mixing surface waters with different ANC and the long-term changes that may occur during the transformation of soil chemical properties such as the cation-exchanger complex and/or the precipitation/dissolution reactions of secondary minerals. During the latter soil water re-equilibrates with the solid soil and chronic acidification may lead to increased aluminum concentrations. Surface waters from such chronically acidified soils have a different chemical signature often with elevated aluminum concentrations. Given that the surface water may often be in contact with labile forms of aluminum containing minerals, each surface water carries a mineral signal corresponding to a certain pH and certain DOC concentration. In natural systems the aluminum concentration is dependant on pH in a complex manner (LaZerte, 1984, Tipping et al., 1991, Schecher and Driscoll, 1995).

Total buffering as shown above is dependant on both pH, TOC and aluminum. Cory and co-workers (Cory et al. 2004) have presented data for Swedish surface waters that document the amount of total and organically bound aluminum in Swedish surface waters in Northern Sweden. This data set and three others, the 2000 nationwide lake inventory, the 1995 stream inventory and data from the three catchments Aneboda, Gammtratten and Kindlahöjd may be used to generate a distribution of aluminum as a function of pH and TOC. Total aluminum concentration as a function of pH and TOC was evaluated using more than 2200 natural water samples. The data include the 1995 stream survey (Wilander et al., 1998), the 2000 lake survey (Wilander et al., 2003), the sampling sites Aneboda, Gammtratten and Kindlahöjd from the natural survey program (Löfgren (ed.), 2005) and data from the ongoing study of the Krycklan catchment (Buffam, unpublished data, www.ccrew.sek.slu.se). Initially each data set was aggregated into pH classes starting at pH 3 through 7.5 and TOC classes starting from 0 through 50ppm using 0.5 pH units and 2.5 ppm as respective class sizes. Average aluminum concentrations were then computed as a function of pH and TOC. When data on organic aluminium were available these data were processed in an equivalent manner.

As a representative for all of the data the aluminium concentration dependence on pH of the 1995 stream survey data as a function of pH is given below :

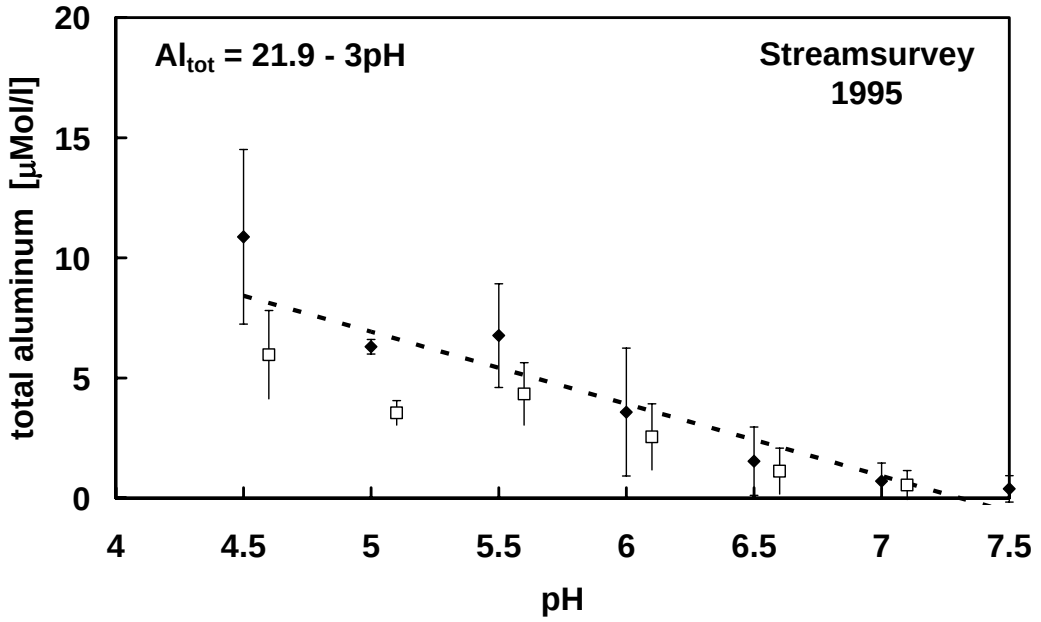

Figure 2 : Total aluminum concentration as a function of pH for the 1995 stream survey data set. Error bars represent the standard deviation for respective parameter in each class.

The pH value used here is direct pH and not air equilibrated. The degree of degassing from the field to the laboratory may to some extent be responsible for the large variations of total aluminum concentrations observed. Organic aluminum always makes up for more than 75% of total aluminum especially at higher pH. The site Kindlahöjd has an aluminum pH dependency that is significantly different from all other sites and this is most probably due to increased aluminum mobility due to acidification. Obviously single sites may behave very specifically, and we thus decided to exclude the data from the three single catchments from the following aluminum analysis.
Adding all data (n = 2200) from the 1995 stream survey, the samples from the 2000 lake survey and the Krycklan sampling campaign one retrieves a table with a distribution of average total aluminum concentration as a function of pH and TOC.

Table 1:

	average total aluminum concentration [μmol/l]							
pH	**TOC 2.5 ppm**	**TOC 5 ppm**	**TOC 7.5 ppm**	**TOC 10 ppm**	**TOC 12.5 ppm**	**TOC 15 ppm**	**TOC 17.5 ppm**	**TOC 20 ppm**
3	1361.5 ± 0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	6.2 ± 0	6.7 ± 0
4.5	n.d.	10.5 ± 0	11.6 ± 0	4.8 ± 9.1	1.4 ± 0	7.5 ± 9	8.6 ± 15.1	9.7 ± 16.9
5	n.d.	3.4 ± 8.2	3.5 ± 6.9	9.4 ± 7.4	9.9 ± 14.2	8.3 ± 13.5	9 ± 14.9	10.5 ± 18
5.5	1.5 ± 0	2.7 ± 4.3	7.5 ± 7.5	8.8 ± 9.1	7.5 ± 11.5	8.2 ± 12.9	8.9 ± 10.4	10.2 ± 10.6
6	1.5 ± 1.8	2.3 ± 5.9	4.5 ± 9.3	5.8 ± 17	5.6 ± 20.9	7.2 ± 13	8.6 ± 12.2	10.8 ± 16.9
6.5	0.9 ± 2.7	1.4 ± 5.2	2.2 ± 9.7	3.8 ± 41.5	4.2 ± 13.9	5.7 ± 42	5.9 ± 19.7	6.1 ± 14.4
7	0.6 ± 3.5	0.9 ± 9.4	1.3 ± 8.4	1.6 ± 6.1	2.3 ± 9.5	3.4 ± 15.2	5 ± 33.7	2.2 ± 4
7.5	0.4 ± 1.2	0.6 ± 7.1	0.9 ± 5.3	1.1 ± 6.8	0.7 ± 2.4	0.5 ± 1.1	0.8 ± 2.1	0.8 ± 2.2

The whole data set is displayed in the annex.
n.d. : no data available.

A plot of this data reveals a systematic variation of aluminum as a function of pH and TOC with aluminum increasing both with decreasing pH and increasing TOC. This plot may be used to fit a mathematical curve through the observed data and create a nomogram that displays total aluminum concentration as a function of pH and TOC that is displayed below :

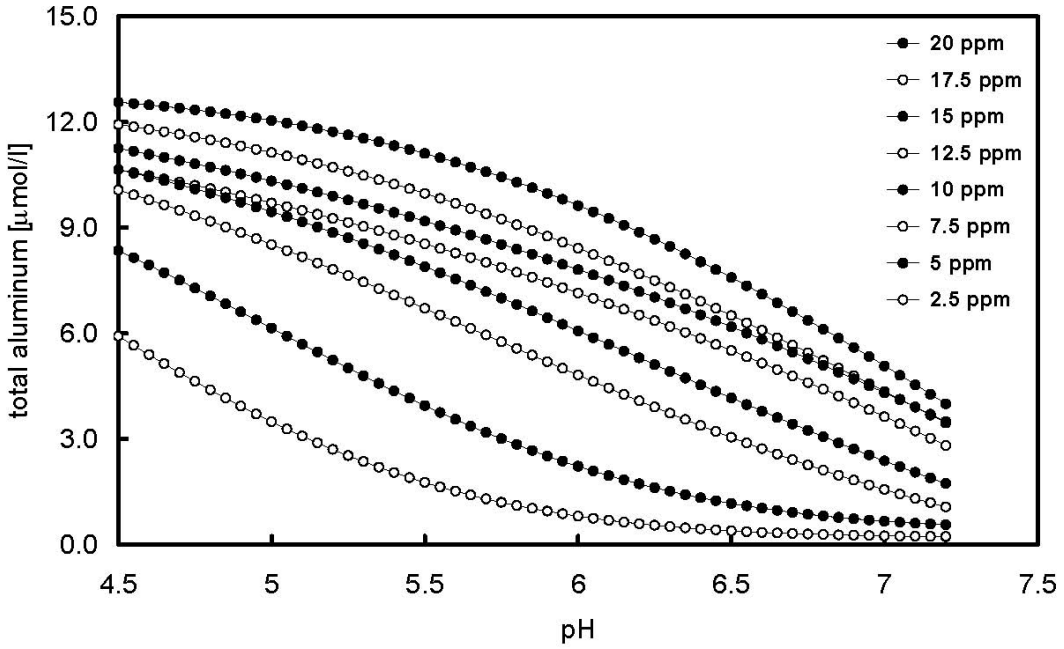

Figure 3: Al-TOC-pH nomogram. Highest curve corresponds to 20 ppm and the lowest to 2.5 ppm TOC.

The comparison between the actual data and the data from the nomogram are plotted below. In order not to overload the figure data for three different TOC concentrations have been chosen.

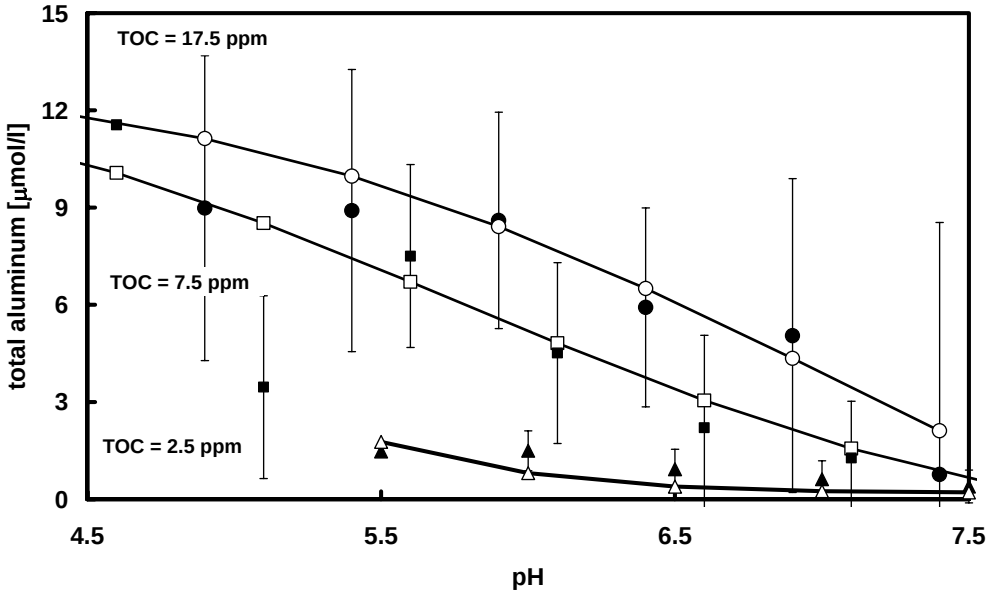

Figure 4: Comparison of observed and nomogram calculated total aluminum concentrations as a function of pH and TOC for three different TOC concentrations : 2.5 (triangles) 7.5 (squares) and 17.5 (circles) respectively. Bold lines with empty symbols display the nomogram data while filled symbols represent the actual average data in each class. Error bars represent the observed standard deviation within each class. The pH classes for the data at TOC = 7.5ppm and TOC = 17.5ppm have been shifted 0.1 pH unit down respective up to aid the readability of the standard deviation in each class. For the same reason the standard deviation for the most acid sample at TOC = 17.5 ppm has been omitted.

Apart from one data point at pH 5 (filled squares) for the samples with a TOC of around 7.5 ppm the nomogram data correspond closely to the actual average data. We may thus have good confidence that the nomogram approach produces reliable average aluminum data for samples where no measurements are available.

With this diagram it is now possible to systematically quantify the effect of aluminium on pH buffering in Swedish surface waters given sample pH and sample TOC concentration.

Modelling the buffering using WHAM and the Swedish 3-pKa model

The Swedish 3-pKa buffering curve was created using the code PHREEQC V. 2.8 (Parkhurst, 1998) and implemented as displayed in the attached files. The organic acid site density m is set to 3.4 µmoles/mg TOC (Hruška et al. 2003). A water sample containing 10 mg of organic matter would thus contain 34 µmoles/l H_3A (c.f eq. 13 through 16). Samples are assumed to be in equilibrium with atmospheric carbon dioxide at every moment. Aluminum and fluoride concentrations are set to zero and changes in acid and base are produced through addition of hydrochloric acid and sodium hydroxide. Titration curves at fixed pCO2 and fixed TOC may be plotted as a function of added base. The change in pH per added base equals the acid neutralizing capacity in equation 12.

In the WHAM code the organic acid concentration is entered into the code as concentration in either humic (HA) or fulvic acid (FA) through a conversion depending on the carbon content of the organic matter. On average organic matter contains 50% Carbon and the default conversion equations are the following :

[g/l] FA = TOC * 2 (eq. 17)
[g/l] HA = TOC *2 (eq. 18)

In surface waters FA dominate by a large margin. An appropriate conversion factor was chosen by fitting pH for more than 150 samples of the Krycklan data set and varying the conversion factor for FA (c.f. figure 2 in the annex). The selected value of 2.3 produces equal concentrations of total carboxylic acids as calibrated by Köhler et al. 2002 (KÖHLER et al., 2002) for a large set of Swedish surface waters. Initially a comparison between the WHAM model and the PHREEQC code was undertaken to assure that the buffering curves for waters where organic carbon is absent does not show systematic deviations.

The WHAM model is then used to reproduce a set of buffering curves of water samples at fixed TOC and Al concentrations. The acid-base pH-buffering curve at a TOC of 5 ppm and various total aluminium concentrations is displayed below :

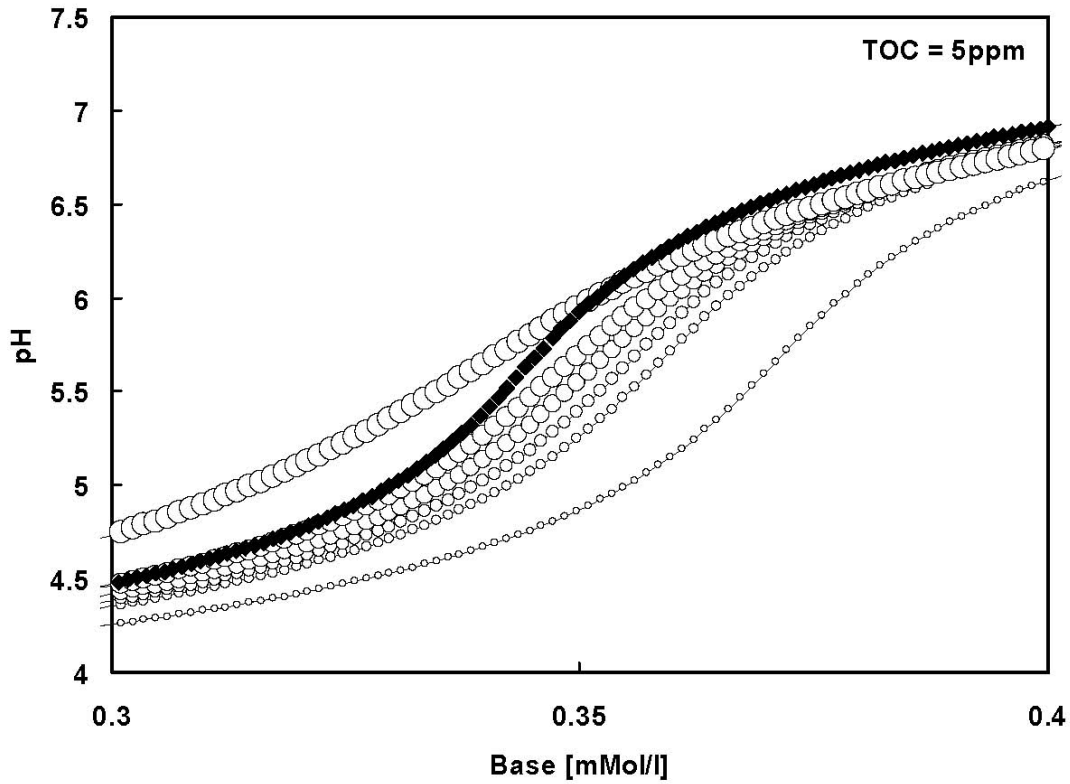

Figure 5: Buffering curves as a function at different aluminum concentrations at a given TOC concentration of 5 ppm. Black line Swedish 3-pKa model and white circles WHAM Al-TOC buffering at different initial aluminum concentrations. Aluminum concentration increases with increasing circle size, the largest circles represent water samples with a total aluminum concentration of 20 µmoles/l and the smallest of 0.5 µmoles/l. All samples are equilibrated with a partial pressure equal to the average atmospheric carbon dioxide concentration of around 350 ppm CO_2 .

The buffering curves vary visually from the average buffering curve of the Swedish 3-pKa model. Two major differences come to sight, a systematic offset and a difference in slope. The offset is created by the difference in the definition of organic acid charge in the two models and the addition of aluminum. When comparing the buffering behavior this offset has no influence on the evaluation. The difference in slope at a given pH is due to the effective difference in buffering caused by the presence of aluminum. This difference is evaluated systematically in the section below.

Comparing the buffering behaviour

All equilibrium pH values calculated in the following are equilibrated with a carbon dioxide concentration of 350 ppm. The comparison of the buffering behavior between the two different models may now be undertaken as described in the algorithm below :

1) Choose a sample $pH_{(eq, 0)}$ and sample TOC
2) Use the nomogram to select a corresponding aluminum value. This step may be skipped if the aluminum concentration is given.
3) Choose the appropriate WHAM Al-TOC buffering curve.
4) Calculate the change in ANC ($\Delta ANC_{eqc0.4}$) for a pH step from $pH_{(eq,0)}$ down to $pH_{(eq, Sweden)} = pH_{(eq,0)} - 0.4$ using the Swedish 3-pKa model.
5) Select the ANC value from the WHAM Al-TOC buffering curve that corresponds to $pH_{(eq,0)}$ and decrease ANC with $\Delta ANC_{eqc0.4}$ to find a new equilibrium $pH_{(eq,WHAM)}$
6) Calculate the pH change as $pH_{(eq, Sweden)} - pH_{(eq,WHAM)} = \Delta pH$.

Two example calculations are given in the appendix.

Evaluation of the observed pH differences and conclusions

The above algorithm was used to create a systematic analysis of ΔpHerr at different TOC concentrations and different $pH_{(0)}$ values. In the below diagram ΔpH is plotted as a function of $pH_{(0)}$ at four different TOC concentrations: 2.5ppm, 5 ppm, 10 ppm and 20 ppm TOC.

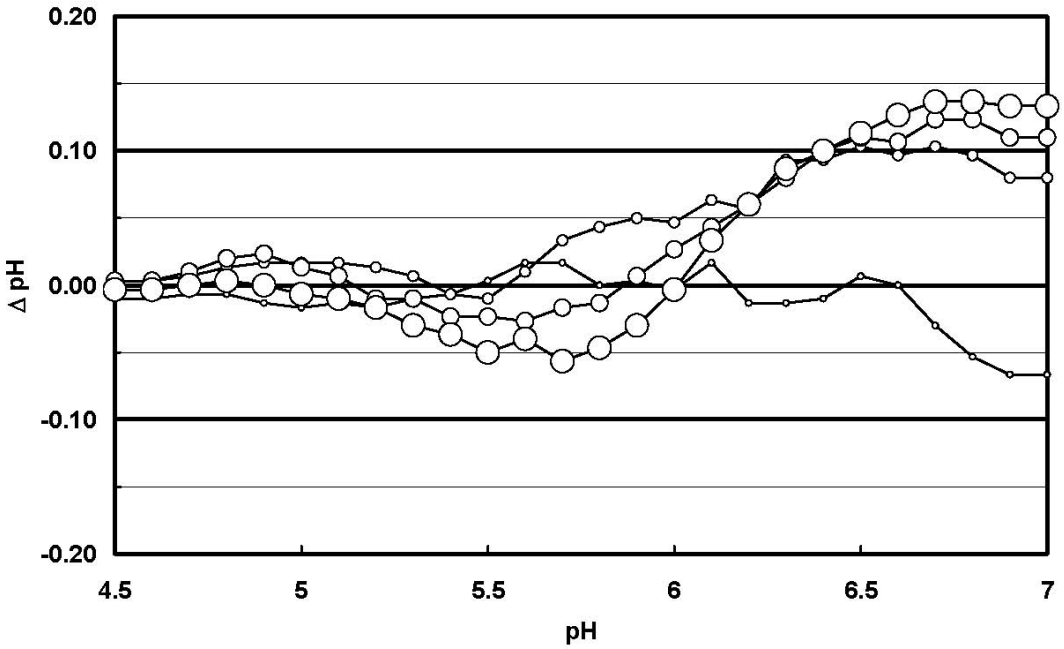

Figure 6: Average difference $\Delta pH = pH_{(eq, Sweden)} - pH_{(eq,WHAM)}$ in pH buffering using the Swedish 3-pKa model and WHAM at different TOC concentrations and corresponding initial aluminum values taken from the nomogram. Values below zero indicate a higher buffering when using WHAM and vice versa. The Δ pH plotted here have been calculated from three values at pH ± 0.1 .The size of the circles indicates the concentration of TOC.

Relatively large variations in total aluminum concentrations have been observed in the dataset used to create the nomogram. The standard deviation is up to 100% for samples with a TOC of 2.5 ppm and up to 50% in the rest of the samples. This observation led us to do a sensitivity analysis on the effect of changing Al values for this type of water. This evaluation of the effect of deviation in the aluminum concentration on Δ pH was undertaken for the most weakly buffered samples at TOC = 2.5 ppm (i.e. those where the pH is most likely to be effected). In this simulation the corresponding aluminum concentrations from step number 2) were systematically changed by a factor of 5, 2, 1, 0.5 and 0.2 (i.e. from 5 times the mean, to 1/5 of the mean Al used in the nomogram..

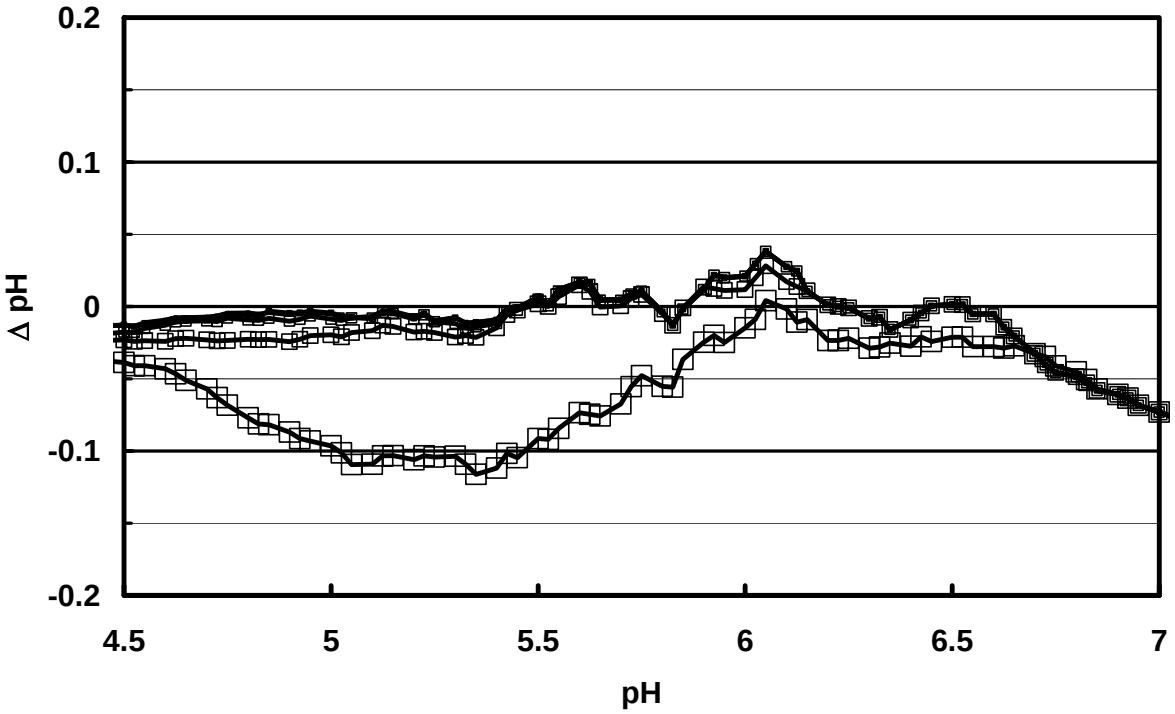

Figure 7: Average difference $\Delta pH = pH_{(eq, Sweden)} - pH_{(eq,WHAM)}$ in pH buffering using the Swedish 3-pKa model and WHAM at different TOC concentrations and corresponding initial aluminum values taken from the nomogram. These values were then multiplied with 5, 2, 1, 0.5 and 0.2 prior to the calculations described in steps 3 to 6. Values below zero indicate a higher buffering when using WHAM and vice versa. The Δ pH plotted here has been calculated from the mean Δ pH of five values : at $pH_{(0,eq)}$, $pH_{(0,eq)} \pm 0.05$ and $pH_{(0,eq)} \pm 0.1$ .The size of the circles indicates the concentration of aluminum.

Discussion:

There are various sources of error when measuring and modelling equilibrium pH in water samples. Even when excluding the effects of differences in carbon dioxide partial pressure systematic and random measurement errors in pH are easily on the order of 0.1 pH units. Modelling pH may give rise to even higher errors when considering the effect of both systematic errors in TOC, alkalinity and pCO_2 (Köhler et al., 2000). Swedish surface water samples are on average modelled with a precision on the order of 0.15 units (Köhler et al., 2001, Köhler et al., 2002). In the following we will consider pH differences to be significant above 0.1 pH units.

Before discussing the observed pattern it is important to point out that the above curves are the result of a systematic analysis of water samples using the Al-TOC-pH nomogram (Fig. 3). Water

samples that have much higher or much lower aluminium concentrations than the average population will differ in their behaviour as illustrated in Fig. 7.

The pH response curves in figure 5 have a complex pattern and systematic differences in pH buffering may be detected. At a given TOC concentration, buffering behaviour differs as a function of pH. For example at a TOC of 20 ppm, the Swedish 3-pKa model underestimates buffering with up to 0.05 pH units when the initial pH is below 6 (when using the change in ANC needed to give a 0.4 unit decline in pH according the Swedish 3 pKa model). Above pH 6 the Swedish 3-pKa model overestimates buffering with up to 0.14 pH units at pH 7. Samples with a TOC of 2.5 ppm and below do not show any systematic difference when compared to the Swedish 3-pKa model. Significant differences appear at initial pH values above pH 6.4 for waters with TOC higher than 5 ppm (The average TOC concentration in Swedish streams is 5 ppm and in Swedish lakes 8 ppm (Wilander et al., 1998)) Water samples with those characteristics have a higher buffering capacity when using the Swedish 3-pKa model as compared to the WHAM code that explicitly includes Al buffering. In these cases pH decrease due to acid input (ANC decrease) is systematically underestimated by up to 0.15 pH units, relative to the 0.4 pH unit decline predicted by the Swedish 3-pKa model.

The most important result is that samples in the weakly buffered pH range between pH 5 and 6 (c.f. slopes in figure 5) do not exhibit a significant pH difference as a result of Al. In this region small changes in ANC will lead to a large pH drop and a high precision in the prediction of pH changes are vital. Here both models predict equal pH changes.

In the well buffered region of pH above 6.5, on the other hand, differences are significant. In view of these results we suggest accounting for differences in the two models when considering the calculation of acidification of samples with a pH above 6.5 in their pre-industrial reference condition. Samples with higher total aluminum concentrations than the average sample population need to be treated individually using the buffering curves in the annex.

The analysis of the sensitivity of changing total aluminum concentrations indicates no significant changes in Δ pH as long as the measured aluminum concentration deviate less than 100% from the average value given in the nomogram (Fig. 3). In acidified areas surface waters may contain elevated amounts of aluminum. From figure 7 it may be seen that buffering in those cases would be up to 0.1 pH units higher than what is expected when using the Swedish 3-pka model, a result that is in accordance with intuition as elevated aluminum concentrations increase buffering. This “extra” Al buffering means that the Swedish EQC system based on the Swedish 3-pKa model will predict a greater decline in pH for a given ANC decline than is actually the case.

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Appendix:

Table 1: Buffering curve of the Swedish 3-pKa model at four different concentrations : 2.5 ppm, 5.0 ppm, 10.0 ppm and 20.0 ppm. Sample ANC for TOC = 2.5 and 5.0 are displayed in column 1, sample ANC for TOC = 10.0 is displayed in column 5 and that for 20.0 in column 8. The corresponding equilibrium pH is found to the right of the respective columns.

Table 2 : Al-pH-TOC nomogram data : total aluminium concentration as a function of pH (ROWS) and TOC (COLUMNS) in µmoles/l.

Table 3 : Buffering curve of WHAM at TOC = 2.5 ppm at various total aluminium concentrations. Sample ANC in column 1 and equilibrium pH in columns 2 to 12 with increasing total aluminium concentration.

Table 4 : Buffering curve of WHAM at TOC = 5.0 ppm at various total aluminium concentrations. Sample ANC in column 1 and equilibrium pH in columns 2 to 12 with increasing total aluminium concentration.

Table 5 : Buffering curve of WHAM at TOC = 10.0 ppm at various total aluminium concentrations. Sample ANC in column 1 and equilibrium pH in columns 2 to 12 with increasing total aluminium concentration.

Table 6 : Buffering curve of WHAM at TOC = 20.0 ppm at various total aluminium concentrations. Sample ANC in column 1 and equilibrium pH in columns 2 to 12 with increasing total aluminium concentration.

Table 7 : Actual average total aluminium concentration as a function of pH and TOC using the data sets 1995 stream survey, 2000 lake survey and the Krycklan data set.

Table 8 : PhreeqC input file

Figure 1 : Apparent dissociation of the Swedish 3-pKa triprotic acid analogue model.

Figure 2 : Comparison between modelled and measured pH using WHAM for the Krycklan data set.

Figure 3 : Average Al-pH relationship for the 1995 stream survey data.

Figure 4 : Average Al-pH relationship for the 2000 lake survey data.

Figure 5 : Average Al-pH relationship for the Krycklan data set.

Figure 6 : Average Al-pH relationship for the Kindlahöjd, Gammtratten and Aneboda catchment.

Example calculation C

Comparison of a surface water with a "*preindustrial"* pH of 6.1 at TOC of 5.0 ppm and two different aluminium concentrations :

Example calculation C 1

We consider a water sample with an initial pH of 6.1 and TOC of 5.0 ppm. From **table 1** column 3 (TOC = 5.00 ppm) a sample ANC of 0.354 mMol/l at pH 6.08 is read out in ROW 368. At pH 5.7 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.345 mMol/l (the closet corresponding pH being 5.68) is read out. This implies a Δ ANC of 0.354 – 0.345 = 0.009 mMol/l. This is amount of acid needed to induce a 0.4 pH unit drop when using the Swedish 3-pKa model.

The corresponding sample aluminium **("***industrial time"*) concentration under those conditions are taken from the data in **table 2**. The corresponding aluminium concentration is 1.96 μmol/l Al in COLUMN 8 (TOC = 5.00 ppm) and ROW 53 (pH = 6.1). The closest corresponding aluminium concentration in **table 4** (TOC = 5.00 ppm) is 2.5. Thus the data in column 4 apply. At pH 6.1 ANC is read out as 0.368mMol/l (the closest pH is 6.11 in this case). The new ANC is calculated as 0.368 – 0.009 = 0.359. The pH that corresponds to an ANC of 0.359 mMol/l is found in ROW 112 pH = 5.65. Now Δ pH is calculated as 5.7 – 5.65 = 0.05. The Swedish 3 pKa- model overestimates the pH drop by 0.05 pH units. This value is not significant.

Example calculation C 2

We consider a water sample with an initial pH of 6.1 and TOC of 5.0 ppm and 0.50 μmol/l total aluminium (one fifth than the average sample population thus in this example we assume that acidification has increased aluminium five times).

We consider a water sample with an initial pH of 6.1 and TOC of 5.0 ppm. From **table 1** column 3 (TOC = 5.00 ppm) a sample ANC of 0.354 mMol/l at pH 6.08 is read out in ROW 368. At pH 5.7 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.345 mMol/l (the closet corresponding pH being 5.68) is read out. This implies a Δ ANC of 0.354 – 0.345 = 0.009 mMol/l.

As the aluminium concentration is given the data in **table 2** are not needed and we proceed to **table 4** but now choose the values in column 2 (total aluminium is 0.5 μmol/l). At pH 6.1 ANC is read out as 0.371 mMol/l (the closest pH is

6.13 in this case). The new ANC is calculated as 0.371 – 0.009 = 0.362. The pH that corresponds to an ANC of 0.362 mMol/l is found in ROW 123 pH = 5.66. Now Δ pH is calculated as 5.7 – 5.66 = 0.04. The Swedish 3 pKa-model overestimates the pH drop by 0.02 pH units. This value is not significant.

We may conclude that the presence of increased amount of aluminium has not increased the buffering significantly. While the "*preindustrial*" pH has dropped from 6.1 down to 5.66, the "*industrial*" pH has dropped from 6.1 down to 5.65.

Example calculation D

Comparison of a surface water with a "*preindustria"l* pH of 5.4 at TOC of 2.5 ppm and two different aluminium concentrations :

Example calculation D 1

We consider a water sample with an initial pH of 5.4 and TOC of 2.5 ppm. From **table 1** column 2 (TOC = 2.50 ppm) a sample ANC of 0.329 mMol/l at pH 5.38 is read out in ROW 342. At pH 5.0 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.320 mMol/l (the closet corresponding pH being 4.98) is read out. This implies a Δ ANC of 0.329 – 0.320 = 0.009 mMol/l. This is amount of acid needed to induce a 0.4 pH unit drop when using the Swedish 3-pKa model.

The corresponding sample aluminium **("***industrial time"***)** concentration under those conditions are taken from the data in **table 2**. The corresponding aluminium concentration is 2.05 μmol/l Al in COLUMN 9 (TOC = 2.50 ppm) and ROW 31 (pH = 5.4). The closest corresponding aluminium concentration in **table 3** (TOC = 2.50 ppm) is 2.5. Thus the data in column 4 apply. At pH 5.4 ANC is read out as 0.348mMol/l (the closest pH is 5.40 in this case). The new ANC is calculated as 0.348 – 0.009 = 0.339. The pH that corresponds to an ANC of 0.339 mMol/l is found in ROW 96 pH = 4.96. Now Δ pH is calculated as 5.0 – 4.96 = 0.04. The Swedish 3 pKa- model overestimates the pH drop by 0.04 pH units. This value is not significant.

Example calculation D 2

We consider a water sample with an initial pH of 5.4 and TOC of 2.5 ppm. From **table 1** column 2 (TOC = 2.50 ppm) a sample ANC of 0.329 mMol/l at pH 5.38 is read out in ROW 342. At pH 5.0 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.320 mMol/l (the closet corresponding pH being 4.98) is read out. This implies a Δ ANC of 0.329 – 0.320 = 0.009 mMol/l.

This is amount of acid needed to induce a 0.4 pH unit drop when using the Swedish 3-pKa model.

As the aluminium concentration is given the data in **table 2** are not needed and we proceed to **table 3** but now choose the values in column 2 (total aluminium is 0.5 μmol/l). At pH 5.4 ANC is read out as 0.346 mMol/l (the closest pH is 5.39 in this case). The new ANC is calculated as 0.346 – 0.009 = 0.337. The pH that corresponds to an ANC of 0.337 mMol/l is found in ROW 95 pH = 5.00. Now Δ pH is calculated as 5.0 – 5.00 = 0.00. The Swedish 3 pKa-model calculates the same value.

We may conclude that the presence of increased amount of aluminium has not increased the buffering significantly. While the "*preindustrial*" pH has dropped from 5.4 down to 5.00, the "*industrial*" pH has dropped from 5.4 down to 4.96.

Example calculation E 1

Comparison of a surface water with a *"preindustrial"* pH of 4.9 at TOC of 2.5 ppm and two different aluminium concentrations :

Example calculation E 1

We consider a water sample with an initial pH of 4.9 and TOC of 2.5 ppm. From **table 1** column 2 (TOC = 2.50 ppm) a sample ANC of 0.317 mMol/l at pH 4.89 is read out in ROW 330. At pH 4.5 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.296 mMol/l (the closet corresponding pH being 4.50) is read out. This implies a Δ ANC of 0.317 – 0.296 = 0.021 mMol/l. This is amount of acid needed to induce a 0.4 pH unit drop when using the Swedish 3-pKa model.

We now want to assume an elevated aluminium concentration of 20 μmol/l (four times the average value). The aluminium concentration is given the data in **table 2** are not needed and we proceed to **table 3** but now choose the values in column 12 (total aluminium is 20.0 μmol/l). At pH 4.9 ANC is read out as 0.343 mMol/l (the closest pH is 4.91 in this case). The new ANC is calculated as 0.343 – 0.021 = 0.322. The pH that corresponds to an ANC of 0.322 mMol/l is found in ROW 83 pH = 4.60. Now Δ pH is calculated as 4.5 – 4.60 = -0.10. The Swedish 3 pKa-model underestimates the pH drop by 0.1 pH units. This value is significant.

Example calculation E 2

We consider a water sample with an initial pH of 4.9 and TOC of 2.5 ppm. From **table 1** column 2 (TOC = 2.50 ppm) a sample ANC of 0.317 mMol/l at pH 4.89 is read out in ROW 330. At pH 4.5 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.296 mMol/l (the closet corresponding pH being 4.50) is read out. This implies a Δ ANC of 0.317 – 0.296 = 0.021 mMol/l. This is amount of acid needed to induce a 0.4 pH unit drop when using the Swedish 3-pKa model.

We now want to assume an decreased aluminium concentration of 0.50 μmol/l (less than 15% of the average value). The aluminium concentration is given the data in **table 2** are not needed and we proceed to **table 3** but now choose the values in column 2 (total aluminium is 0.5 μmol/l). At pH 4.9 ANC is read out as 0.333 mMol/l (the closest pH is 4.89 in this case). The new ANC is calculated as 0.333 – 0.021 = 0.312. The pH that corresponds to an ANC of 0.312 mMol/l is found in ROW 75 pH = 4.50. Now Δ pH is calculated as 4.5 – 4.50 = 0.00. The Swedish 3 pKa-model calculates the same value.

We may conclude that the presence of increased amount of aluminium has increased the buffering significantly. While the "*preindustrial*" pH has dropped from 4.9 down to 4.50, the "*industrial*" pH has dropped from 4.9 down to 4.6.

Example calculation F

Comparison of a surface water with a "*pre-industrial*" pH of 6.9 at TOC of 5.0 ppm and two different aluminium concentrations :

Example calculation F 1

We consider a water sample with an initial pH of 6.9 and TOC of 5.0 ppm. From **table 1** column 3 (TOC = 5.00 ppm) a sample ANC of 0.398 mMol/l at pH 6.08 is read out in ROW 414. At pH 6.5 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.369 mMol/l (the closet corresponding pH being 6.50) is read out. This implies a Δ ANC of 0.398 – 0.369 = 0.029 mMol/l. This is amount of acid needed to induce a 0.4 pH unit drop when using the Swedish 3-pKa model.

The corresponding sample aluminium **("***industrial time"*) concentration under those conditions are taken from the data in **table 2**. The corresponding aluminium concentration is 0.73 μmol/l Al in COLUMN 8 (TOC = 5.00 ppm) and ROW 53 (pH = 6.1). The closest corresponding aluminium concentration in **table 4** (TOC = 5.00 ppm) is 0.5. Thus the data in column 2 apply. At pH 6.9 ANC is read out as 0.421 mMol/l (the closest pH is 6.90 in this case). The new ANC is calculated as 0.421 – 0.029 = 0.392. The pH that corresponds to an ANC of 0.392 mMol/l is found in ROW 139 pH = 6.47. Now Δ pH is calculated

as 6.4 – 6.47 = -0.07. The Swedish 3 pKa- model underestimates the pH drop by 0.07 pH units. This value is almost not significant.

Example calculation F 2

We consider a water sample with an "*pre-industrial*" pH of 6.9 and TOC of 5.0 ppm and 5.0 μmol/l total aluminium (more than seven times than the average sample population thus in this example we assume that acidification has increased aluminium seven times).

We consider a water sample with an initial pH of 6.9 and TOC of 5.0 ppm. From **table 1** column 3 (TOC = 5.00 ppm) a sample ANC of 0.398 mMol/l at pH 6.08 is read out in ROW 414. At pH 6.5 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.369 mMol/l (the closet corresponding pH being 6.50) is read out. This implies a Δ ANC of 0.398 – 0.369 = 0.029 mMol/l. This is amount of acid needed to induce a 0.4 pH unit drop when using the Swedish 3-pKa model.

As the aluminium concentration is given the data in **table 2** are not needed and we proceed to **table 4** but now choose the values in column 6 (total aluminium is 5.0 μmol/l). At pH 6.9 ANC is read out as 0.408 mMol/l (the closest pH is 6.13 in this case). The new ANC is calculated as 0.408 – 0.029 = 0.379. The pH that corresponds to an ANC of 0.379 mMol/l is found in ROW 128 pH = 6.48. Now Δ pH is calculated as 6.4 – 6.48 = -0.08. The Swedish 3 pKa-model underestimates the pH drop by 0.08 pH units. This value is almost significant.

We may conclude that the presence of increased amount of aluminium has not increased the buffering significantly. While the "*industrial*" pH has dropped from 6.9 down to 6.47, the "*industrial acidified* " pH has dropped from 6.9 down to 6.48. This is little surprising result is most probably due to the fact that aluminium is almost completely bound by the organic acids.

Example calculation A

We consider a water sample with an initial pH of 6.6 and TOC of 10.0 ppm. From **table 1** column 6 (TOC = 10.00ppm) a sample ANC of 0.406 mMol/l at pH 6.6 is read out in ROW 349. At pH 6.2 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.385 mMol/l (the closet corresponding pH being 6.21) is read out. This implies a Δ ANC of 0.406 – 0.385 = 0.021 mMol/l.

The corresponding sample aluminum concentration under those conditions are taken from the data in **table 2**. The corresponding aluminum concentration is 3.79 µmol/l Al in COLUMN 6 (TOC = 10.00 ppm) and ROW 63 (pH = 6.6). The closest corresponding aluminum concentration in **table 5** (TOC = 10.00 ppm) is 3.75. Thus the data in column 5 apply. At pH 6.6 ANC is read out as 0.423mMol/l (the closest pH is 6.61 in this case). The new ANC is calculated as 0.423 – 0.021 = 0.402. The pH that corresponds to an ANC of 0.402 mMol/l is found in ROW 147 pH = 6.16. Now Δ pH is calculated as 6.2 – 6.16 = 0.04. The Swedish 3 pKa-model underestimates the pH drop by 0.04 pH units. This value is not significant.

Example calculation B

We consider a water sample with an initial pH of 6.6 and TOC of 10.0 ppm and 15.00 µmol/l total aluminum (four times as the average sample population).

From **table 1** column 6 (TOC = 10.00ppm) a sample ANC of 0.406 mMol/l at pH 6.6 is read out in ROW 349. At pH 6.2 (assuming a 0.4 pH unit pH depression) a new sample ANC of 0.385 mMol/l (the closest corresponding pH being 6.21) is read out. This implies a Δ ANC of 0.406 – 0.385 = 0.021 mMol/l.

As the aluminum concentration is given the data in **table 2** are not needed and we proceed to **table 5** but now choose the values in column 11 (total aluminum is 15.0 µmol/l). At pH 6.6 ANC is read out as 0.413 mMol/l (the closest pH is 6.61 in this case). The new ANC is calculated as 0.413 – 0.021 = 0.392. The pH that corresponds to an ANC of 0.392 mMol/l is found in ROW 139 pH = 6.23. Now Δ pH is calculated as 6.2 – 6.23 = -0.03. The Swedish 3 pKa-model overestimates the pH drop by 0.03 pH units. This value is not significant.

Table 1

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
1	0.000	3.50	3.50		0.000	3.50		0.000	3.50
2	0.001	3.50	3.50		0.001	3.50		0.002	3.50
3	0.002	3.50	3.50		0.002	3.50		0.003	3.51
4	0.003	3.50	3.50		0.003	3.50		0.005	3.51
5	0.004	3.51	3.50		0.005	3.50		0.006	3.51
6	0.005	3.51	3.51		0.006	3.51		0.008	3.51
7	0.006	3.51	3.51		0.007	3.51		0.009	3.51
8	0.007	3.51	3.51		0.008	3.51		0.011	3.52
9	0.008	3.51	3.51		0.009	3.51		0.013	3.52
10	0.009	3.51	3.51		0.010	3.51		0.014	3.52
11	0.010	3.51	3.51		0.012	3.51		0.016	3.52
12	0.011	3.52	3.51		0.013	3.51		0.017	3.53
13	0.012	3.52	3.52		0.014	3.52		0.019	3.53
14	0.013	3.52	3.52		0.015	3.52		0.020	3.53
15	0.013	3.52	3.52		0.016	3.52		0.022	3.53
16	0.014	3.52	3.52		0.017	3.52		0.024	3.53
17	0.015	3.52	3.52		0.019	3.52		0.025	3.54
18	0.016	3.52	3.52		0.020	3.52		0.027	3.54
19	0.017	3.52	3.52		0.021	3.53		0.028	3.54
20	0.018	3.53	3.52		0.022	3.53		0.030	3.54
21	0.019	3.53	3.53		0.023	3.53		0.031	3.54
22	0.020	3.53	3.53		0.024	3.53		0.033	3.55
23	0.021	3.53	3.53		0.026	3.53		0.035	3.55
24	0.022	3.53	3.53		0.027	3.53		0.036	3.55
25	0.023	3.53	3.53		0.028	3.54		0.038	3.55
26	0.024	3.53	3.53		0.029	3.54		0.039	3.56
27	0.025	3.54	3.53		0.030	3.54		0.041	3.56
28	0.026	3.54	3.54		0.031	3.54		0.042	3.56
29	0.027	3.54	3.54		0.033	3.54		0.044	3.56
30	0.028	3.54	3.54		0.034	3.54		0.046	3.56
31	0.029	3.54	3.54		0.035	3.55		0.047	3.57
32	0.030	3.54	3.54		0.036	3.55		0.049	3.57
33	0.031	3.54	3.54		0.037	3.55		0.050	3.57
34	0.032	3.55	3.54		0.038	3.55		0.052	3.57
35	0.033	3.55	3.55		0.040	3.55		0.054	3.58
36	0.034	3.55	3.55		0.041	3.55		0.055	3.58
37	0.035	3.55	3.55		0.042	3.56		0.057	3.58
38	0.036	3.55	3.55		0.043	3.56		0.058	3.58
39	0.037	3.55	3.55		0.044	3.56		0.060	3.59
40	0.038	3.55	3.55		0.045	3.56		0.061	3.59
41	0.039	3.56	3.55		0.047	3.56		0.063	3.59
42	0.040	3.56	3.56		0.048	3.56		0.065	3.59
43	0.040	3.56	3.56		0.049	3.57		0.066	3.60
44	0.041	3.56	3.56		0.050	3.57		0.068	3.60
45	0.042	3.56	3.56		0.051	3.57		0.069	3.60
46	0.043	3.56	3.56		0.052	3.57		0.071	3.60
47	0.044	3.56	3.56		0.054	3.57		0.072	3.61
48	0.045	3.57	3.56		0.055	3.58		0.074	3.61
49	0.046	3.57	3.57		0.056	3.58		0.076	3.61
50	0.047	3.57	3.57		0.057	3.58		0.077	3.61

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
51	0.048	3.57	3.57		0.058	3.58		0.079	3.62
52	0.049	3.57	3.57		0.059	3.58		0.080	3.62
53	0.050	3.57	3.57		0.061	3.58		0.082	3.62
54	0.051	3.58	3.57		0.062	3.59		0.083	3.62
55	0.052	3.58	3.57		0.063	3.59		0.085	3.63
56	0.053	3.58	3.58		0.064	3.59		0.087	3.63
57	0.054	3.58	3.58		0.065	3.59		0.088	3.63
58	0.055	3.58	3.58		0.066	3.59		0.090	3.63
59	0.056	3.58	3.58		0.068	3.60		0.091	3.64
60	0.057	3.58	3.58		0.069	3.60		0.093	3.64
61	0.058	3.59	3.58		0.070	3.60		0.094	3.64
62	0.059	3.59	3.59		0.071	3.60		0.096	3.64
63	0.060	3.59	3.59		0.072	3.60		0.098	3.65
64	0.061	3.59	3.59		0.073	3.61		0.099	3.65
65	0.062	3.59	3.59		0.075	3.61		0.101	3.65
66	0.063	3.59	3.59		0.076	3.61		0.102	3.66
67	0.064	3.60	3.59		0.077	3.61		0.104	3.66
68	0.065	3.60	3.59		0.078	3.61		0.105	3.66
69	0.066	3.60	3.60		0.079	3.62		0.107	3.66
70	0.067	3.60	3.60		0.080	3.62		0.109	3.67
71	0.067	3.60	3.60		0.082	3.62		0.110	3.67
72	0.068	3.60	3.60		0.083	3.62		0.112	3.67
73	0.069	3.61	3.60		0.084	3.62		0.113	3.68
74	0.070	3.61	3.60		0.085	3.63		0.115	3.68
75	0.071	3.61	3.61		0.086	3.63		0.116	3.68
76	0.072	3.61	3.61		0.087	3.63		0.118	3.68
77	0.073	3.61	3.61		0.089	3.63		0.120	3.69
78	0.074	3.61	3.61		0.090	3.63		0.121	3.69
79	0.075	3.62	3.61		0.091	3.64		0.123	3.69
80	0.076	3.62	3.61		0.092	3.64		0.124	3.70
81	0.077	3.62	3.62		0.093	3.64		0.126	3.70
82	0.078	3.62	3.62		0.094	3.64		0.127	3.70
83	0.079	3.62	3.62		0.096	3.64		0.129	3.71
84	0.080	3.62	3.62		0.097	3.65		0.131	3.71
85	0.081	3.63	3.62		0.098	3.65		0.132	3.71
86	0.082	3.63	3.62		0.099	3.65		0.134	3.72
87	0.083	3.63	3.63		0.100	3.65		0.135	3.72
88	0.084	3.63	3.63		0.101	3.65		0.137	3.72
89	0.085	3.63	3.63		0.103	3.66		0.139	3.73
90	0.086	3.63	3.63		0.104	3.66		0.140	3.73
91	0.087	3.64	3.63		0.105	3.66		0.142	3.73
92	0.088	3.64	3.63		0.106	3.66		0.143	3.74
93	0.089	3.64	3.64		0.107	3.67		0.145	3.74
94	0.090	3.64	3.64		0.108	3.67		0.146	3.74
95	0.091	3.64	3.64		0.110	3.67		0.148	3.75
96	0.092	3.64	3.64		0.111	3.67		0.150	3.75
97	0.093	3.65	3.64		0.112	3.67		0.151	3.75
98	0.094	3.65	3.64		0.113	3.68		0.153	3.76
99	0.094	3.65	3.65		0.114	3.68		0.154	3.76
100	0.095	3.65	3.65		0.115	3.68		0.156	3.76
101	0.096	3.65	3.65		0.117	3.68		0.157	3.77
102	0.097	3.66	3.65		0.118	3.69		0.159	3.77

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
103	0.098	3.66	3.65		0.119	3.69		0.161	3.77
104	0.099	3.66	3.66		0.120	3.69		0.162	3.78
105	0.100	3.66	3.66		0.121	3.69		0.164	3.78
106	0.101	3.66	3.66		0.122	3.69		0.165	3.78
107	0.102	3.66	3.66		0.124	3.70		0.167	3.79
108	0.103	3.67	3.66		0.125	3.70		0.168	3.79
109	0.104	3.67	3.66		0.126	3.70		0.170	3.79
110	0.105	3.67	3.67		0.127	3.70		0.172	3.80
111	0.106	3.67	3.67		0.128	3.71		0.173	3.80
112	0.107	3.67	3.67		0.129	3.71		0.175	3.81
113	0.108	3.68	3.67		0.131	3.71		0.176	3.81
114	0.109	3.68	3.67		0.132	3.71		0.178	3.81
115	0.110	3.68	3.68		0.133	3.72		0.179	3.82
116	0.111	3.68	3.68		0.134	3.72		0.181	3.82
117	0.112	3.68	3.68		0.135	3.72		0.183	3.83
118	0.113	3.69	3.68		0.136	3.72		0.184	3.83
119	0.114	3.69	3.68		0.138	3.73		0.186	3.83
120	0.115	3.69	3.69		0.139	3.73		0.187	3.84
121	0.116	3.69	3.69		0.140	3.73		0.189	3.84
122	0.117	3.69	3.69		0.141	3.73		0.190	3.85
123	0.118	3.70	3.69		0.142	3.74		0.192	3.85
124	0.119	3.70	3.69		0.143	3.74		0.194	3.85
125	0.120	3.70	3.70		0.145	3.74		0.195	3.86
126	0.121	3.70	3.70		0.146	3.74		0.197	3.86
127	0.121	3.70	3.70		0.147	3.75		0.198	3.87
128	0.122	3.71	3.70		0.148	3.75		0.200	3.87
129	0.123	3.71	3.70		0.149	3.75		0.201	3.88
130	0.124	3.71	3.71		0.150	3.75		0.203	3.88
131	0.125	3.71	3.71		0.152	3.76		0.205	3.89
132	0.126	3.71	3.71		0.153	3.76		0.206	3.89
133	0.127	3.72	3.71		0.154	3.76		0.208	3.89
134	0.128	3.72	3.71		0.155	3.77		0.209	3.90
135	0.129	3.72	3.72		0.156	3.77		0.211	3.90
136	0.130	3.72	3.72		0.157	3.77		0.212	3.91
137	0.131	3.73	3.72		0.159	3.77		0.214	3.91
138	0.132	3.73	3.72		0.160	3.78		0.216	3.92
139	0.133	3.73	3.72		0.161	3.78		0.217	3.92
140	0.134	3.73	3.73		0.162	3.78		0.219	3.93
141	0.135	3.73	3.73		0.163	3.79		0.220	3.93
142	0.136	3.74	3.73		0.164	3.79		0.222	3.94
143	0.137	3.74	3.73		0.166	3.79		0.224	3.94
144	0.138	3.74	3.73		0.167	3.79		0.225	3.95
145	0.139	3.74	3.74		0.168	3.80		0.227	3.95
146	0.140	3.74	3.74		0.169	3.80		0.228	3.96
147	0.141	3.75	3.74		0.170	3.80		0.230	3.96
148	0.142	3.75	3.74		0.171	3.81		0.231	3.97
149	0.143	3.75	3.75		0.173	3.81		0.233	3.97
150	0.144	3.75	3.75		0.174	3.81		0.235	3.98
151	0.145	3.76	3.75		0.175	3.81		0.236	3.98
152	0.146	3.76	3.75		0.176	3.82		0.238	3.99
153	0.147	3.76	3.75		0.177	3.82		0.239	4.00
154	0.147	3.76	3.76		0.178	3.82		0.241	4.00

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
155	0.148	3.77	3.76		0.180	3.83		0.242	4.01
156	0.149	3.77	3.76		0.181	3.83		0.244	4.01
157	0.150	3.77	3.76		0.182	3.83		0.246	4.02
158	0.151	3.77	3.77		0.183	3.84		0.247	4.02
159	0.152	3.78	3.77		0.184	3.84		0.249	4.03
160	0.153	3.78	3.77		0.185	3.84		0.250	4.04
161	0.154	3.78	3.77		0.187	3.85		0.252	4.04
162	0.155	3.78	3.78		0.188	3.85		0.253	4.05
163	0.156	3.78	3.78		0.189	3.85		0.255	4.05
164	0.157	3.79	3.78		0.190	3.86		0.257	4.06
165	0.158	3.79	3.78		0.191	3.86		0.258	4.07
166	0.159	3.79	3.79		0.192	3.86		0.260	4.07
167	0.160	3.79	3.79		0.194	3.87		0.261	4.08
168	0.161	3.80	3.79		0.195	3.87		0.263	4.09
169	0.162	3.80	3.79		0.196	3.87		0.264	4.09
170	0.163	3.80	3.80		0.197	3.88		0.266	4.10
171	0.164	3.81	3.80		0.198	3.88		0.268	4.11
172	0.165	3.81	3.80		0.199	3.88		0.269	4.11
173	0.166	3.81	3.80		0.201	3.89		0.271	4.12
174	0.167	3.81	3.81		0.202	3.89		0.272	4.13
175	0.168	3.82	3.81		0.203	3.89		0.274	4.13
176	0.169	3.82	3.81		0.204	3.90		0.275	4.14
177	0.170	3.82	3.81		0.205	3.90		0.277	4.15
178	0.171	3.82	3.82		0.206	3.91		0.279	4.16
179	0.172	3.83	3.82		0.208	3.91		0.280	4.16
180	0.173	3.83	3.82		0.209	3.91		0.282	4.17
181	0.174	3.83	3.82		0.210	3.92		0.283	4.18
182	0.174	3.83	3.83		0.211	3.92		0.285	4.19
183	0.175	3.84	3.83		0.212	3.92		0.286	4.20
184	0.176	3.84	3.83		0.213	3.93		0.288	4.20
185	0.177	3.84	3.83		0.215	3.93		0.290	4.21
186	0.178	3.85	3.84		0.216	3.94		0.291	4.22
187	0.179	3.85	3.84		0.217	3.94		0.293	4.23
188	0.180	3.85	3.84		0.218	3.94		0.294	4.24
189	0.181	3.85	3.85		0.219	3.95		0.296	4.25
190	0.182	3.86	3.85		0.220	3.95		0.297	4.25
191	0.183	3.86	3.85		0.222	3.96		0.299	4.26
192	0.184	3.86	3.85		0.223	3.96		0.301	4.27
193	0.185	3.87	3.86		0.224	3.96		0.302	4.28
194	0.186	3.87	3.86		0.225	3.97		0.304	4.29
195	0.187	3.87	3.86		0.226	3.97		0.305	4.30
196	0.188	3.87	3.87		0.227	3.98		0.307	4.31
197	0.189	3.88	3.87		0.229	3.98		0.309	4.32
198	0.190	3.88	3.87		0.230	3.99		0.310	4.33
199	0.191	3.88	3.87		0.231	3.99		0.312	4.34
200	0.192	3.89	3.88		0.232	4.00		0.313	4.35
201	0.193	3.89	3.88		0.233	4.00		0.315	4.36
202	0.194	3.89	3.88		0.234	4.00		0.316	4.37
203	0.195	3.90	3.89		0.236	4.01		0.318	4.38
204	0.196	3.90	3.89		0.237	4.01		0.320	4.39
205	0.197	3.90	3.89		0.238	4.02		0.321	4.40
206	0.198	3.91	3.90		0.239	4.02		0.323	4.42

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
207	0.199	3.91	3.90		0.240	4.03		0.324	4.43
208	0.200	3.91	3.90		0.241	4.03		0.326	4.44
209	0.201	3.92	3.90		0.243	4.04		0.327	4.45
210	0.201	3.92	3.91		0.244	4.04		0.329	4.46
211	0.202	3.92	3.91		0.245	4.05		0.331	4.48
212	0.203	3.93	3.91		0.246	4.05		0.332	4.49
213	0.204	3.93	3.92		0.247	4.06		0.334	4.50
214	0.205	3.93	3.92		0.248	4.06		0.335	4.51
215	0.206	3.94	3.92		0.250	4.07		0.337	4.53
216	0.207	3.94	3.93		0.251	4.07		0.338	4.54
217	0.208	3.94	3.93		0.252	4.08		0.340	4.55
218	0.209	3.95	3.93		0.253	4.08		0.342	4.57
219	0.210	3.95	3.94		0.254	4.09		0.343	4.58
220	0.211	3.95	3.94		0.255	4.09		0.345	4.60
221	0.212	3.96	3.94		0.257	4.10		0.346	4.61
222	0.213	3.96	3.95		0.258	4.11		0.348	4.63
223	0.214	3.96	3.95		0.259	4.11		0.349	4.65
224	0.215	3.97	3.96		0.260	4.12		0.351	4.66
225	0.216	3.97	3.96		0.261	4.12		0.353	4.68
226	0.217	3.98	3.96		0.262	4.13		0.354	4.70
227	0.218	3.98	3.97		0.264	4.13		0.356	4.71
228	0.219	3.98	3.97		0.265	4.14		0.357	4.73
229	0.220	3.99	3.97		0.266	4.15		0.359	4.75
230	0.221	3.99	3.98		0.267	4.15		0.360	4.77
231	0.222	4.00	3.98		0.268	4.16		0.362	4.79
232	0.223	4.00	3.98		0.269	4.17		0.364	4.81
233	0.224	4.00	3.99		0.271	4.17		0.365	4.83
234	0.225	4.01	3.99		0.272	4.18		0.367	4.85
235	0.226	4.01	4.00		0.273	4.18		0.368	4.87
236	0.227	4.02	4.00		0.274	4.19		0.370	4.89
237	0.228	4.02	4.00		0.275	4.20		0.371	4.92
238	0.228	4.02	4.01		0.276	4.21		0.373	4.94
239	0.229	4.03	4.01		0.278	4.21		0.375	4.97
240	0.230	4.03	4.02		0.279	4.22		0.376	4.99
241	0.231	4.04	4.02		0.280	4.23		0.378	5.02
242	0.232	4.04	4.02		0.281	4.23		0.379	5.04
243	0.233	4.05	4.03		0.282	4.24		0.381	5.07
244	0.234	4.05	4.03		0.283	4.25		0.382	5.10
245	0.235	4.05	4.04		0.285	4.26		0.384	5.13
246	0.236	4.06	4.04		0.286	4.26		0.386	5.16
247	0.237	4.06	4.04		0.287	4.27		0.387	5.20
248	0.238	4.07	4.05		0.288	4.28		0.389	5.23
249	0.239	4.07	4.05		0.289	4.29		0.390	5.27
250	0.240	4.08	4.06		0.290	4.29		0.392	5.30
251	0.241	4.08	4.06		0.292	4.30		0.394	5.34
252	0.242	4.09	4.07		0.293	4.31		0.395	5.38
253	0.243	4.09	4.07		0.294	4.32		0.397	5.41
254	0.244	4.10	4.08		0.295	4.33		0.398	5.45
255	0.245	4.10	4.08		0.296	4.34		0.400	5.49
256	0.246	4.11	4.09		0.297	4.35		0.401	5.53
257	0.247	4.11	4.09		0.298	4.36		0.403	5.57
258	0.248	4.12	4.10		0.300	4.36		0.405	5.61

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
259	0.249	4.12	4.10		0.301	4.37		0.406	5.65
260	0.250	4.13	4.10		0.302	4.38		0.408	5.69
261	0.251	4.13	4.11		0.303	4.39		0.409	5.73
262	0.252	4.14	4.11		0.304	4.40		0.411	5.76
263	0.253	4.14	4.12		0.305	4.41		0.412	5.80
264	0.254	4.15	4.12		0.307	4.42		0.414	5.84
265	0.254	4.16	4.13		0.308	4.43		0.416	5.87
266	0.255	4.16	4.14		0.309	4.44		0.417	5.90
267	0.256	4.17	4.14		0.310	4.46		0.419	5.94
268	0.257	4.17	4.15		0.311	4.47		0.420	5.97
269	0.258	4.18	4.15		0.312	4.48		0.422	6.00
270	0.259	4.19	4.16		0.314	4.49		0.423	6.03
271	0.260	4.19	4.16		0.315	4.50		0.425	6.06
272	0.261	4.20	4.17		0.316	4.51		0.427	6.09
273	0.262	4.20	4.17		0.317	4.53		0.428	6.12
274	0.263	4.21	4.18		0.318	4.54		0.430	6.14
275	0.264	4.22	4.18		0.319	4.55		0.431	6.17
276	0.265	4.22	4.19		0.321	4.56		0.433	6.19
277	0.266	4.23	4.20		0.322	4.58		0.434	6.22
278	0.267	4.24	4.20		0.323	4.59		0.436	6.25
279	0.268	4.24	4.21		0.324	4.61		0.438	6.27
280	0.269	4.25	4.22		0.325	4.62		0.439	6.29
281	0.270	4.26	4.22		0.326	4.64		0.441	6.32
282	0.271	4.26	4.23		0.328	4.65		0.442	6.34
283	0.272	4.27	4.23		0.329	4.67		0.444	6.36
284	0.273	4.28	4.24		0.330	4.68		0.445	6.38
285	0.274	4.29	4.25		0.331	4.70		0.447	6.40
286	0.275	4.29	4.25		0.332	4.72		0.449	6.43
287	0.276	4.30	4.26		0.333	4.73		0.450	6.45
288	0.277	4.31	4.27		0.335	4.75		0.452	6.47
289	0.278	4.32	4.27		0.336	4.77		0.453	6.49
290	0.279	4.33	4.28		0.337	4.79		0.455	6.51
291	0.280	4.33	4.29		0.338	4.81		0.456	6.53
292	0.281	4.34	4.30		0.339	4.83		0.458	6.54
293	0.281	4.35	4.30		0.340	4.85		0.460	6.56
294	0.282	4.36	4.31		0.342	4.87		0.461	6.58
295	0.283	4.37	4.32		0.343	4.90		0.463	6.60
296	0.284	4.38	4.33		0.344	4.92		0.464	6.62
297	0.285	4.39	4.33		0.345	4.95		0.466	6.63
298	0.286	4.40	4.34		0.346	4.97		0.467	6.65
299	0.287	4.41	4.35		0.347	5.00		0.469	6.67
300	0.288	4.42	4.36		0.349	5.03		0.471	6.68
301	0.289	4.43	4.37		0.350	5.06		0.472	6.70
302	0.290	4.44	4.38		0.351	5.09		0.474	6.72
303	0.291	4.45	4.39		0.352	5.12		0.475	6.73
304	0.292	4.46	4.39		0.353	5.15		0.477	6.75
305	0.293	4.47	4.40		0.354	5.19		0.478	6.76
306	0.294	4.48	4.41		0.356	5.22		0.480	6.78
307	0.295	4.49	4.42		0.357	5.26		0.482	6.79
308	0.296	4.50	4.43		0.358	5.30		0.483	6.80
309	0.297	4.52	4.44		0.359	5.34		0.485	6.82
310	0.298	4.53	4.45		0.360	5.39		0.486	6.83

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
311	0.299	4.54	4.46		0.361	5.43		0.488	6.84
312	0.300	4.56	4.47		0.363	5.48		0.490	6.86
313	0.301	4.57	4.48		0.364	5.52		0.491	6.87
314	0.302	4.58	4.49		0.365	5.57		0.493	6.88
315	0.303	4.60	4.50		0.366	5.61		0.494	6.90
316	0.304	4.61	4.52		0.367	5.66		0.496	6.91
317	0.305	4.63	4.53		0.368	5.70		0.497	6.92
318	0.306	4.64	4.54		0.370	5.75		0.499	6.93
319	0.307	4.66	4.55		0.371	5.79		0.501	6.94
320	0.308	4.68	4.56		0.372	5.83		0.502	6.95
321	0.308	4.70	4.58		0.373	5.87		0.504	6.97
322	0.309	4.71	4.59		0.374	5.91		0.505	6.98
323	0.310	4.73	4.60		0.375	5.95		0.507	6.99
324	0.311	4.75	4.62		0.377	5.99		0.508	7.00
325	0.312	4.77	4.63		0.378	6.02		0.510	7.01
326	0.313	4.80	4.65		0.379	6.06		0.512	7.02
327	0.314	4.82	4.66		0.380	6.09		0.513	7.03
328	0.315	4.84	4.68		0.381	6.12		0.515	7.04
329	0.316	4.87	4.69		0.382	6.15		0.516	7.05
330	0.317	4.89	4.71		0.384	6.18		0.518	7.06
331	0.318	4.92	4.73		0.385	6.21		0.519	7.07
332	0.319	4.95	4.75		0.386	6.24		0.521	7.08
333	0.320	4.98	4.76		0.387	6.26		0.523	7.08
334	0.321	5.01	4.78		0.388	6.29		0.524	7.09
335	0.322	5.05	4.80		0.389	6.31		0.526	7.10
336	0.323	5.09	4.82		0.391	6.34		0.527	7.11
337	0.324	5.13	4.84		0.392	6.36		0.529	7.12
338	0.325	5.17	4.87		0.393	6.38		0.530	7.13
339	0.326	5.22	4.89		0.394	6.41		0.532	7.14
340	0.327	5.27	4.91		0.395	6.43		0.534	7.14
341	0.328	5.32	4.94		0.396	6.45		0.535	7.15
342	0.329	5.38	4.97		0.398	6.47		0.537	7.16
343	0.330	5.44	4.99		0.399	6.49		0.538	7.17
344	0.331	5.50	5.02		0.400	6.51		0.540	7.17
345	0.332	5.56	5.05		0.401	6.53		0.541	7.18
346	0.333	5.63	5.09		0.402	6.55		0.543	7.19
347	0.334	5.70	5.12		0.403	6.56		0.545	7.20
348	0.335	5.76	5.16		0.405	6.58		0.546	7.20
349	0.335	5.82	5.19		0.406	6.60		0.548	7.21
350	0.336	5.88	5.23		0.407	6.61		0.549	7.22
351	0.337	5.94	5.28		0.408	6.63		0.551	7.23
352	0.338	5.99	5.32		0.409	6.65		0.552	7.23
353	0.339	6.04	5.37		0.410	6.66		0.554	7.24
354	0.340	6.09	5.42		0.412	6.68		0.556	7.25
355	0.341	6.13	5.47		0.413	6.69		0.557	7.25
356	0.342	6.17	5.52		0.414	6.71		0.559	7.26
357	0.343	6.21	5.57		0.415	6.72		0.560	7.26
358	0.344	6.24	5.63		0.416	6.73		0.562	7.27
359	0.345	6.27	5.68		0.417	6.75		0.563	7.28
360	0.346	6.31	5.73		0.419	6.76		0.565	7.28
361	0.347	6.34	5.78		0.420	6.77		0.567	7.29
362	0.348	6.36	5.83		0.421	6.79		0.568	7.30

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
363	0.349	6.39	5.88		0.422	6.80		0.570	7.30
364	0.350	6.42	5.92		0.423	6.81		0.571	7.31
365	0.351	6.44	5.97		0.424	6.82		0.573	7.31
366	0.352	6.46	6.01		0.426	6.83		0.575	7.32
367	0.353	6.49	6.05		0.427	6.85		0.576	7.32
368	0.354	6.51	6.08		0.428	6.86		0.578	7.33
369	0.355	6.53	6.12		0.429	6.87		0.579	7.34
370	0.356	6.55	6.15		0.430	6.88		0.581	7.34
371	0.357	6.57	6.19		0.431	6.89		0.582	7.35
372	0.358	6.59	6.22		0.433	6.90		0.584	7.35
373	0.359	6.60	6.25		0.434	6.91		0.586	7.36
374	0.360	6.62	6.27		0.435	6.92		0.587	7.36
375	0.361	6.64	6.30		0.436	6.93		0.589	7.37
376	0.362	6.65	6.33		0.437	6.94		0.590	7.37
377	0.362	6.67	6.35		0.438	6.95		0.592	7.38
378	0.363	6.68	6.38		0.440	6.96		0.593	7.38
379	0.364	6.70	6.40		0.441	6.97		0.595	7.39
380	0.365	6.71	6.42		0.442	6.97		0.597	7.39
381	0.366	6.73	6.44		0.443	6.98		0.598	7.40
382	0.367	6.74	6.46		0.444	6.99		0.600	7.40
383	0.368	6.75	6.48		0.445	7.00		0.601	7.41
384	0.369	6.77	6.50		0.447	7.01		0.603	7.41
385	0.370	6.78	6.52		0.448	7.02		0.604	7.42
386	0.371	6.79	6.54		0.449	7.03		0.606	7.42
387	0.372	6.80	6.56		0.450	7.03		0.608	7.42
388	0.373	6.81	6.57		0.451	7.04		0.609	7.43
389	0.374	6.82	6.59		0.452	7.05		0.611	7.43
390	0.375	6.83	6.61		0.454	7.06		0.612	7.44
391	0.376	6.85	6.62		0.455	7.06		0.614	7.44
392	0.377	6.86	6.64		0.456	7.07		0.615	7.45
393	0.378	6.87	6.65		0.457	7.08		0.617	7.45
394	0.379	6.88	6.67		0.458	7.09		0.619	7.45
395	0.380	6.89	6.68		0.459	7.09		0.620	7.46
396	0.381	6.89	6.70		0.461	7.10		0.622	7.46
397	0.382	6.90	6.71		0.462	7.11		0.623	7.47
398	0.383	6.91	6.72		0.463	7.11		0.625	7.47
399	0.384	6.92	6.73		0.464	7.12		0.626	7.48
400	0.385	6.93	6.75		0.465	7.13		0.628	7.48
401	0.386	6.94	6.76		0.466	7.13		0.630	7.48
402	0.387	6.95	6.77		0.468	7.14		0.631	7.49
403	0.388	6.96	6.78		0.469	7.15		0.633	7.49
404	0.388	6.96	6.79		0.470	7.15		0.634	7.50
405	0.389	6.97	6.80		0.471	7.16		0.636	7.50
406	0.390	6.98	6.82		0.472	7.16		0.637	7.50
407	0.391	6.99	6.83		0.473	7.17		0.639	7.51
408	0.392	7.00	6.84		0.475	7.18		0.641	7.51
409	0.393	7.00	6.85		0.476	7.18		0.642	7.51
410	0.394	7.01	6.86		0.477	7.19		0.644	7.52
411	0.395	7.02	6.87		0.478	7.19		0.645	7.52
412	0.396	7.03	6.88		0.479	7.20		0.647	7.52
413	0.397	7.03	6.88		0.480	7.20		0.648	7.53
414	0.398	7.04	6.89		0.482	7.21		0.650	7.53

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
415	0.399	7.05	6.90		0.483	7.22		0.652	7.54
416	0.400	7.05	6.91		0.484	7.22		0.653	7.54
417	0.401	7.06	6.92		0.485	7.23		0.655	7.54
418	0.402	7.07	6.93		0.486	7.23		0.656	7.55
419	0.403	7.07	6.94		0.487	7.24		0.658	7.55
420	0.404	7.08	6.95		0.489	7.24		0.660	7.55
421	0.405	7.09	6.95		0.490	7.25		0.661	7.56
422	0.406	7.09	6.96		0.491	7.25		0.663	7.56
423	0.407	7.10	6.97		0.492	7.26		0.664	7.56
424	0.408	7.10	6.98		0.493	7.26		0.666	7.57
425	0.409	7.11	6.99		0.494	7.27		0.667	7.57
426	0.410	7.12	6.99		0.496	7.27		0.669	7.57
427	0.411	7.12	7.00		0.497	7.28		0.671	7.58
428	0.412	7.13	7.01		0.498	7.28		0.672	7.58
429	0.413	7.13	7.01		0.499	7.29		0.674	7.58
430	0.414	7.14	7.02		0.500	7.29		0.675	7.59
431	0.415	7.14	7.03		0.501	7.29		0.677	7.59
432	0.415	7.15	7.04		0.503	7.30		0.678	7.59
433	0.416	7.15	7.04		0.504	7.30		0.680	7.59
434	0.417	7.16	7.05		0.505	7.31		0.682	7.60
435	0.418	7.16	7.06		0.506	7.31		0.683	7.60
436	0.419	7.17	7.06		0.507	7.32		0.685	7.60
437	0.420	7.17	7.07		0.508	7.32		0.686	7.61
438	0.421	7.18	7.07		0.510	7.33		0.688	7.61
439	0.422	7.18	7.08		0.511	7.33		0.689	7.61
440	0.423	7.19	7.09		0.512	7.33		0.691	7.62
441	0.424	7.19	7.09		0.513	7.34		0.693	7.62
442	0.425	7.20	7.10		0.514	7.34		0.694	7.62
443	0.426	7.20	7.10		0.515	7.35		0.696	7.62
444	0.427	7.21	7.11		0.517	7.35		0.697	7.63
445	0.428	7.21	7.12		0.518	7.35		0.699	7.63
446	0.429	7.22	7.12		0.519	7.36		0.700	7.63
447	0.430	7.22	7.13		0.520	7.36		0.702	7.64
448	0.431	7.23	7.13		0.521	7.37		0.704	7.64
449	0.432	7.23	7.14		0.522	7.37		0.705	7.64
450	0.433	7.24	7.14		0.524	7.37		0.707	7.64
451	0.434	7.24	7.15		0.525	7.38		0.708	7.65
452	0.435	7.24	7.15		0.526	7.38		0.710	7.65
453	0.436	7.25	7.16		0.527	7.38		0.711	7.65
454	0.437	7.25	7.16		0.528	7.39		0.713	7.66
455	0.438	7.26	7.17		0.529	7.39		0.715	7.66
456	0.439	7.26	7.17		0.531	7.40		0.716	7.66
457	0.440	7.27	7.18		0.532	7.40		0.718	7.66
458	0.441	7.27	7.18		0.533	7.40		0.719	7.67
459	0.442	7.27	7.19		0.534	7.41		0.721	7.67
460	0.442	7.28	7.19		0.535	7.41		0.722	7.67
461	0.443	7.28	7.20		0.536	7.41		0.724	7.67
462	0.444	7.29	7.20		0.538	7.42		0.726	7.68
463	0.445	7.29	7.21		0.539	7.42		0.727	7.68
464	0.446	7.29	7.21		0.540	7.42		0.729	7.68
465	0.447	7.30	7.22		0.541	7.43		0.730	7.68
466	0.448	7.30	7.22		0.542	7.43		0.732	7.69

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
467	0.449	7.31	7.23		0.543	7.43		0.733	7.69
468	0.450	7.31	7.23		0.545	7.44		0.735	7.69
469	0.451	7.31	7.24		0.546	7.44		0.737	7.69
470	0.452	7.32	7.24		0.547	7.44		0.738	7.70
471	0.453	7.32	7.24		0.548	7.45		0.740	7.70
472	0.454	7.32	7.25		0.549	7.45		0.741	7.70
473	0.455	7.33	7.25		0.550	7.45		0.743	7.70
474	0.456	7.33	7.26		0.552	7.46		0.745	7.71
475	0.457	7.33	7.26		0.553	7.46		0.746	7.71
476	0.458	7.34	7.26		0.554	7.46		0.748	7.71
477	0.459	7.34	7.27		0.555	7.47		0.749	7.71
478	0.460	7.34	7.27		0.556	7.47		0.751	7.72
479	0.461	7.35	7.28		0.557	7.47		0.752	7.72
480	0.462	7.35	7.28		0.559	7.48		0.754	7.72
481	0.463	7.36	7.28		0.560	7.48		0.756	7.72
482	0.464	7.36	7.29		0.561	7.48		0.757	7.72
483	0.465	7.36	7.29		0.562	7.48		0.759	7.73
484	0.466	7.37	7.30		0.563	7.49		0.760	7.73
485	0.467	7.37	7.30		0.564	7.49		0.762	7.73
486	0.468	7.37	7.30		0.566	7.49		0.763	7.73
487	0.469	7.37	7.31		0.567	7.50		0.765	7.74
488	0.469	7.38	7.31		0.568	7.50		0.767	7.74
489	0.470	7.38	7.32		0.569	7.50		0.768	7.74
490	0.471	7.38	7.32		0.570	7.50		0.770	7.74
491	0.472	7.39	7.32		0.571	7.51		0.771	7.74
492	0.473	7.39	7.33		0.573	7.51		0.773	7.75
493	0.474	7.39	7.33		0.574	7.51		0.774	7.75
494	0.475	7.40	7.33		0.575	7.52		0.776	7.75
495	0.476	7.40	7.34		0.576	7.52		0.778	7.75
496	0.477	7.40	7.34		0.577	7.52		0.779	7.76
497	0.478	7.41	7.34		0.578	7.52		0.781	7.76
498	0.479	7.41	7.35		0.580	7.53		0.782	7.76
499	0.480	7.41	7.35		0.581	7.53		0.784	7.76
500	0.481	7.41	7.35		0.582	7.53		0.785	7.76
501	0.482	7.42	7.36		0.583	7.54		0.787	7.77
502	0.483	7.42	7.36		0.584	7.54		0.789	7.03

Table 2

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	Al [µmol/l]							
ROW	pH	20.00	17.50	15.00	12.50	10.00	7.50	5.00	2.50
1	3.5	12.94	12.72	12.55	11.98	11.98	12.08	11.13	2.50
2	3.55	12.93	12.70	12.50	11.93	11.94	12.01	11.05	10.72
3	3.6	12.92	12.67	12.45	11.88	11.90	11.95	10.97	10.51
4	3.65	12.91	12.65	12.39	11.82	11.86	11.87	10.88	10.29
5	3.7	12.90	12.62	12.34	11.77	11.81	11.80	10.79	10.07
6	3.75	12.89	12.59	12.28	11.71	11.76	11.72	10.69	9.84
7	3.8	12.88	12.57	12.23	11.65	11.71	11.63	10.58	9.60
8	3.85	12.87	12.53	12.17	11.59	11.66	11.55	10.46	9.36
9	3.9	12.86	12.50	12.11	11.53	11.60	11.45	10.34	9.11
10	3.95	12.84	12.47	12.05	11.46	11.54	11.36	10.21	8.86
11	4	12.82	12.43	11.98	11.40	11.47	11.26	10.08	8.60
12	4.05	12.81	12.39	11.92	11.33	11.41	11.16	9.93	8.34
13	4.1	12.79	12.35	11.85	11.26	11.34	11.05	9.78	8.08
14	4.15	12.77	12.30	11.78	11.19	11.26	10.94	9.63	7.81
15	4.2	12.74	12.26	11.71	11.12	11.19	10.83	9.46	7.54
16	4.25	12.72	12.21	11.64	11.04	11.11	10.71	9.29	7.27
17	4.3	12.69	12.16	11.56	10.97	11.02	10.59	9.12	7.00
18	4.35	12.66	12.11	11.49	10.89	10.93	10.47	8.93	6.73
19	4.4	12.63	12.05	11.41	10.81	10.84	10.34	8.75	6.46
20	4.45	12.60	11.99	11.33	10.73	10.75	10.21	8.55	6.19
21	4.5	12.57	11.93	11.25	10.65	10.65	10.07	8.35	5.92
22	4.55	12.53	11.86	11.17	10.56	10.55	9.93	8.15	5.66
23	4.6	12.49	11.80	11.08	10.47	10.44	9.79	7.94	5.40
24	4.65	12.44	11.72	10.99	10.38	10.33	9.64	7.72	5.14
25	4.7	12.40	11.65	10.90	10.29	10.22	9.49	7.51	4.89
26	4.75	12.35	11.57	10.81	10.20	10.10	9.34	7.29	4.64
27	4.8	12.29	11.49	10.72	10.10	9.98	9.18	7.06	4.40
28	4.85	12.23	11.41	10.62	10.01	9.85	9.02	6.84	4.16
29	4.9	12.17	11.32	10.53	9.91	9.72	8.85	6.61	3.93
30	4.95	12.11	11.23	10.43	9.80	9.59	8.69	6.38	3.71
31	5	12.04	11.13	10.32	9.70	9.45	8.52	6.15	3.49
32	5.05	11.97	11.03	10.22	9.59	9.31	8.35	5.92	3.28
33	5.1	11.89	10.93	10.11	9.49	9.16	8.17	5.69	3.08
34	5.15	11.81	10.82	10.01	9.38	9.02	8.00	5.46	2.89
35	5.2	11.72	10.71	9.90	9.26	8.86	7.82	5.24	2.70
36	5.25	11.63	10.60	9.78	9.15	8.71	7.64	5.01	2.53
37	5.3	11.54	10.48	9.67	9.03	8.55	7.45	4.79	2.36
38	5.35	11.44	10.36	9.55	8.91	8.39	7.27	4.58	2.20
39	5.4	11.33	10.23	9.43	8.79	8.22	7.08	4.36	2.05
40	5.45	11.22	10.10	9.31	8.67	8.06	6.90	4.15	1.90
41	5.5	11.10	9.97	9.18	8.54	7.89	6.71	3.95	1.76
42	5.55	10.98	9.83	9.06	8.41	7.71	6.52	3.75	1.64
43	5.6	10.85	9.69	8.93	8.28	7.54	6.33	3.55	1.52
44	5.65	10.72	9.54	8.80	8.15	7.36	6.14	3.37	1.40
45	5.7	10.58	9.39	8.66	8.01	7.18	5.95	3.18	1.30
46	5.75	10.44	9.24	8.52	7.87	7.00	5.76	3.01	1.20
47	5.8	10.29	9.08	8.39	7.73	6.81	5.57	2.84	1.11
48	5.85	10.13	8.92	8.24	7.59	6.63	5.38	2.67	1.02
49	5.9	9.97	8.76	8.10	7.44	6.44	5.19	2.52	0.95
50	5.95	9.80	8.59	7.95	7.30	6.25	5.00	2.37	0.87

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	Al [µmol/l]							
ROW	pH	20.00	17.50	15.00	12.50	10.00	7.50	5.00	2.50
51	6	9.63	8.41	7.81	7.14	6.06	4.82	2.22	0.81
52	6.05	9.45	8.24	7.65	6.99	5.87	4.63	2.09	0.74
53	6.1	9.26	8.06	7.50	6.84	5.68	4.45	1.96	0.69
54	6.15	9.07	7.87	7.34	6.68	5.49	4.26	1.84	0.64
55	6.2	8.87	7.69	7.19	6.52	5.30	4.08	1.72	0.59
56	6.25	8.67	7.50	7.02	6.36	5.11	3.90	1.61	0.55
57	6.3	8.46	7.30	6.86	6.19	4.92	3.73	1.51	0.51
58	6.35	8.25	7.11	6.69	6.02	4.73	3.55	1.42	0.47
59	6.4	8.03	6.91	6.53	5.85	4.54	3.38	1.33	0.44
60	6.45	7.81	6.71	6.35	5.68	4.35	3.21	1.25	0.41
61	6.5	7.58	6.50	6.18	5.51	4.16	3.05	1.17	0.39
62	6.55	7.34	6.29	6.00	5.33	3.97	2.88	1.10	0.37
63	6.6	7.11	6.08	5.83	5.15	3.79	2.72	1.03	0.35
64	6.65	6.86	5.87	5.64	4.97	3.60	2.56	0.97	0.33
65	6.7	6.62	5.66	5.46	4.78	3.42	2.41	0.91	0.31
66	6.75	6.37	5.44	5.27	4.60	3.24	2.26	0.86	0.30
67	6.8	6.11	5.23	5.09	4.41	3.06	2.11	0.81	0.28
68	6.85	5.86	5.01	4.90	4.22	2.89	1.97	0.77	0.27
69	6.9	5.60	4.79	4.70	4.02	2.71	1.83	0.73	0.26
70	6.95	5.34	4.57	4.51	3.83	2.54	1.69	0.69	0.25
71	7	5.07	4.34	4.31	3.63	2.38	1.56	0.66	0.25
72	7.05	4.80	4.12	4.11	3.43	2.21	1.43	0.63	0.24
73	7.1	4.53	3.90	3.90	3.22	2.05	1.31	0.61	0.23
74	7.15	4.26	3.67	3.70	3.02	1.89	1.19	0.58	0.23
75	7.2	3.99	3.45	3.49	2.81	1.74	1.07	0.56	0.23

Table 3

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	2.5 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
1	0.000	3.50	3.51	3.50	3.51	3.50	3.51	3.50	3.51	3.50	3.49	3.51
2	0.221	3.93	3.93	3.92	3.93	3.92	3.93	3.92	3.93	3.92	3.90	3.94
3	0.222	3.93	3.94	3.93	3.93	3.92	3.93	3.93	3.94	3.93	3.90	3.95
4	0.224	3.94	3.94	3.93	3.94	3.93	3.94	3.93	3.94	3.93	3.90	3.95
5	0.225	3.94	3.95	3.93	3.94	3.93	3.94	3.94	3.95	3.94	3.91	3.96
6	0.226	3.95	3.95	3.94	3.95	3.94	3.95	3.94	3.95	3.94	3.91	3.96
7	0.227	3.95	3.96	3.94	3.95	3.94	3.95	3.95	3.96	3.94	3.92	3.97
8	0.229	3.96	3.96	3.95	3.96	3.95	3.96	3.95	3.96	3.95	3.92	3.97
9	0.230	3.96	3.97	3.95	3.96	3.95	3.96	3.95	3.97	3.95	3.92	3.98
10	0.231	3.97	3.97	3.96	3.97	3.95	3.97	3.96	3.97	3.96	3.93	3.98
11	0.232	3.97	3.98	3.96	3.97	3.96	3.97	3.96	3.98	3.96	3.93	3.99
12	0.234	3.98	3.98	3.97	3.98	3.96	3.98	3.97	3.98	3.97	3.94	3.99
13	0.235	3.98	3.99	3.97	3.98	3.97	3.98	3.97	3.99	3.97	3.94	4.00
14	0.236	3.99	3.99	3.98	3.99	3.97	3.99	3.98	3.99	3.98	3.95	4.00
15	0.237	3.99	4.00	3.98	3.99	3.98	3.99	3.98	4.00	3.98	3.95	4.01
16	0.239	4.00	4.00	3.99	4.00	3.98	4.00	3.99	4.00	3.99	3.96	4.01
17	0.240	4.00	4.01	3.99	4.00	3.99	4.00	3.99	4.01	3.99	3.96	4.02
18	0.241	4.01	4.01	4.00	4.01	3.99	4.01	4.00	4.01	4.00	3.97	4.02
19	0.242	4.01	4.02	4.00	4.01	4.00	4.01	4.00	4.02	4.00	3.97	4.03
20	0.244	4.02	4.02	4.01	4.02	4.00	4.02	4.01	4.02	4.01	3.97	4.03
21	0.245	4.02	4.03	4.01	4.02	4.01	4.02	4.01	4.03	4.01	3.98	4.04
22	0.246	4.03	4.03	4.02	4.03	4.01	4.03	4.02	4.03	4.02	3.98	4.04
23	0.247	4.03	4.04	4.02	4.03	4.02	4.03	4.02	4.04	4.02	3.99	4.05
24	0.249	4.04	4.04	4.03	4.04	4.03	4.04	4.03	4.04	4.03	3.99	4.05
25	0.250	4.04	4.05	4.03	4.05	4.03	4.04	4.04	4.05	4.03	4.00	4.06
26	0.251	4.05	4.06	4.04	4.05	4.04	4.05	4.04	4.06	4.04	4.00	4.06
27	0.252	4.06	4.06	4.05	4.06	4.04	4.06	4.05	4.06	4.04	4.01	4.07
28	0.253	4.06	4.07	4.05	4.06	4.05	4.06	4.05	4.07	4.05	4.01	4.08
29	0.255	4.07	4.07	4.06	4.07	4.05	4.07	4.06	4.07	4.06	4.02	4.08
30	0.256	4.07	4.08	4.06	4.07	4.06	4.07	4.06	4.08	4.06	4.02	4.09
31	0.257	4.08	4.09	4.07	4.08	4.06	4.08	4.07	4.09	4.07	4.03	4.09
32	0.258	4.09	4.09	4.08	4.09	4.07	4.09	4.08	4.09	4.07	4.04	4.10
33	0.260	4.09	4.10	4.08	4.09	4.08	4.09	4.08	4.10	4.08	4.04	4.11
34	0.261	4.10	4.11	4.09	4.10	4.08	4.10	4.09	4.10	4.09	4.05	4.11
35	0.262	4.11	4.11	4.09	4.11	4.09	4.10	4.09	4.11	4.09	4.05	4.12
36	0.263	4.11	4.12	4.10	4.11	4.10	4.11	4.10	4.12	4.10	4.06	4.13
37	0.265	4.12	4.13	4.11	4.12	4.10	4.12	4.11	4.12	4.10	4.06	4.13
38	0.266	4.13	4.13	4.11	4.13	4.11	4.12	4.11	4.13	4.11	4.07	4.14
39	0.267	4.13	4.14	4.12	4.13	4.12	4.13	4.12	4.14	4.12	4.08	4.15
40	0.268	4.14	4.15	4.13	4.14	4.12	4.14	4.13	4.14	4.12	4.08	4.15
41	0.270	4.15	4.15	4.13	4.15	4.13	4.14	4.13	4.15	4.13	4.09	4.16
42	0.271	4.15	4.16	4.14	4.15	4.14	4.15	4.14	4.16	4.14	4.09	4.17
43	0.272	4.16	4.17	4.15	4.16	4.14	4.16	4.15	4.17	4.14	4.10	4.17
44	0.273	4.17	4.18	4.16	4.17	4.15	4.17	4.16	4.17	4.15	4.11	4.18
45	0.275	4.18	4.19	4.16	4.18	4.16	4.17	4.16	4.18	4.16	4.11	4.19
46	0.276	4.18	4.19	4.17	4.19	4.16	4.18	4.17	4.19	4.17	4.12	4.20
47	0.277	4.19	4.20	4.18	4.19	4.17	4.19	4.18	4.20	4.17	4.13	4.20
48	0.278	4.20	4.21	4.19	4.20	4.18	4.20	4.19	4.20	4.18	4.13	4.21
49	0.280	4.21	4.22	4.19	4.21	4.19	4.21	4.19	4.21	4.19	4.14	4.22
50	0.281	4.22	4.23	4.20	4.22	4.19	4.21	4.20	4.22	4.20	4.15	4.23

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	2.5 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
51	0.282	4.23	4.23	4.21	4.23	4.20	4.22	4.21	4.23	4.20	4.15	4.24
52	0.283	4.23	4.24	4.22	4.23	4.21	4.23	4.22	4.24	4.21	4.16	4.25
53	0.285	4.24	4.25	4.23	4.24	4.22	4.24	4.22	4.25	4.22	4.17	4.25
54	0.286	4.25	4.26	4.24	4.25	4.23	4.25	4.23	4.26	4.23	4.18	4.26
55	0.287	4.26	4.27	4.25	4.26	4.24	4.26	4.24	4.26	4.24	4.18	4.27
56	0.288	4.27	4.28	4.25	4.27	4.25	4.27	4.25	4.27	4.25	4.19	4.28
57	0.290	4.28	4.29	4.26	4.28	4.25	4.27	4.26	4.28	4.25	4.20	4.29
58	0.291	4.29	4.30	4.27	4.29	4.26	4.28	4.27	4.29	4.26	4.21	4.30
59	0.292	4.30	4.31	4.28	4.30	4.27	4.29	4.28	4.30	4.27	4.21	4.31
60	0.293	4.31	4.32	4.29	4.31	4.28	4.30	4.29	4.31	4.28	4.22	4.32
61	0.295	4.32	4.33	4.30	4.32	4.29	4.31	4.30	4.32	4.29	4.23	4.33
62	0.296	4.33	4.34	4.31	4.33	4.30	4.32	4.31	4.33	4.30	4.24	4.34
63	0.297	4.34	4.35	4.32	4.34	4.31	4.33	4.32	4.34	4.31	4.25	4.35
64	0.298	4.35	4.37	4.33	4.35	4.32	4.35	4.33	4.35	4.32	4.25	4.36
65	0.300	4.37	4.38	4.35	4.36	4.33	4.36	4.34	4.36	4.33	4.26	4.37
66	0.301	4.38	4.39	4.36	4.38	4.34	4.37	4.35	4.38	4.34	4.27	4.38
67	0.302	4.39	4.40	4.37	4.39	4.35	4.38	4.36	4.39	4.35	4.28	4.39
68	0.303	4.40	4.42	4.38	4.40	4.37	4.39	4.37	4.40	4.36	4.29	4.40
69	0.305	4.41	4.43	4.39	4.41	4.38	4.40	4.38	4.41	4.37	4.30	4.41
70	0.306	4.43	4.44	4.40	4.43	4.39	4.42	4.39	4.42	4.39	4.31	4.42
71	0.307	4.44	4.46	4.42	4.44	4.40	4.43	4.41	4.44	4.40	4.32	4.44
72	0.308	4.46	4.47	4.43	4.45	4.41	4.44	4.42	4.45	4.41	4.33	4.45
73	0.310	4.47	4.49	4.44	4.47	4.43	4.46	4.43	4.46	4.42	4.34	4.46
74	0.311	4.48	4.50	4.46	4.48	4.44	4.47	4.45	4.48	4.44	4.35	4.47
75	0.312	4.50	4.52	4.47	4.50	4.45	4.48	4.46	4.49	4.45	4.36	4.49
76	0.313	4.52	4.53	4.49	4.51	4.47	4.50	4.47	4.51	4.46	4.37	4.50
77	0.315	4.53	4.55	4.50	4.53	4.48	4.51	4.49	4.52	4.48	4.38	4.51
78	0.316	4.55	4.57	4.52	4.55	4.50	4.53	4.50	4.54	4.49	4.39	4.53
79	0.317	4.57	4.59	4.54	4.56	4.51	4.55	4.52	4.55	4.50	4.41	4.54
80	0.318	4.58	4.61	4.55	4.58	4.53	4.56	4.53	4.57	4.52	4.42	4.56
81	0.320	4.60	4.63	4.57	4.60	4.55	4.58	4.55	4.59	4.53	4.43	4.57
82	0.321	4.62	4.65	4.59	4.62	4.56	4.60	4.57	4.61	4.55	4.44	4.59
83	0.322	4.64	4.67	4.61	4.64	4.58	4.62	4.58	4.62	4.57	4.46	4.60
84	0.323	4.67	4.69	4.63	4.66	4.60	4.64	4.60	4.64	4.58	4.47	4.62
85	0.325	4.69	4.71	4.65	4.68	4.62	4.66	4.62	4.66	4.60	4.48	4.63
86	0.326	4.71	4.74	4.67	4.71	4.64	4.68	4.64	4.68	4.62	4.50	4.65
87	0.327	4.74	4.77	4.69	4.73	4.66	4.70	4.66	4.71	4.64	4.51	4.67
88	0.328	4.76	4.79	4.72	4.76	4.68	4.72	4.68	4.73	4.66	4.52	4.68
89	0.330	4.79	4.82	4.74	4.78	4.70	4.75	4.70	4.75	4.68	4.54	4.70
90	0.331	4.82	4.85	4.77	4.81	4.73	4.77	4.72	4.78	4.70	4.55	4.72
91	0.332	4.85	4.89	4.80	4.84	4.75	4.80	4.75	4.80	4.72	4.57	4.74
92	0.333	4.89	4.92	4.83	4.87	4.78	4.83	4.77	4.83	4.74	4.59	4.75
93	0.335	4.92	4.96	4.86	4.91	4.81	4.86	4.80	4.85	4.76	4.60	4.77
94	0.336	4.96	5.00	4.89	4.94	4.84	4.89	4.83	4.88	4.79	4.62	4.79
95	0.337	5.00	5.04	4.93	4.98	4.87	4.92	4.86	4.91	4.81	4.64	4.81
96	0.338	5.04	5.09	4.96	5.02	4.90	4.96	4.89	4.95	4.84	4.65	4.83
97	0.340	5.09	5.14	5.01	5.07	4.94	5.00	4.92	4.98	4.87	4.67	4.85
98	0.341	5.14	5.20	5.05	5.12	4.97	5.04	4.95	5.01	4.89	4.69	4.87
99	0.342	5.20	5.26	5.10	5.17	5.01	5.08	4.99	5.05	4.92	4.71	4.89
100	0.343	5.26	5.32	5.15	5.23	5.06	5.13	5.02	5.09	4.95	4.73	4.91
101	0.345	5.32	5.39	5.20	5.29	5.10	5.18	5.06	5.13	4.99	4.75	4.93
102	0.346	5.39	5.47	5.26	5.35	5.15	5.23	5.11	5.17	5.02	4.77	4.96

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	2.5 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
103	0.347	5.47	5.55	5.33	5.42	5.21	5.28	5.15	5.22	5.05	4.79	4.98
104	0.348	5.55	5.63	5.40	5.50	5.26	5.34	5.20	5.27	5.09	4.81	5.00
105	0.350	5.63	5.71	5.47	5.57	5.32	5.41	5.25	5.32	5.13	4.84	5.02
106	0.351	5.71	5.79	5.55	5.65	5.39	5.47	5.30	5.37	5.17	4.86	5.04
107	0.352	5.79	5.86	5.63	5.73	5.46	5.54	5.36	5.42	5.21	4.88	5.06
108	0.353	5.87	5.94	5.71	5.80	5.53	5.61	5.42	5.48	5.25	4.91	5.08
109	0.355	5.94	6.01	5.79	5.87	5.60	5.67	5.48	5.54	5.30	4.93	5.10
110	0.356	6.01	6.07	5.86	5.94	5.68	5.74	5.54	5.59	5.35	4.96	5.12
111	0.357	6.08	6.13	5.93	6.00	5.75	5.81	5.60	5.65	5.39	4.98	5.14
112	0.358	6.14	6.18	6.00	6.06	5.82	5.87	5.67	5.71	5.45	5.01	5.16
113	0.360	6.19	6.23	6.06	6.12	5.88	5.93	5.73	5.77	5.50	5.04	5.18
114	0.361	6.24	6.28	6.12	6.17	5.95	5.99	5.79	5.83	5.55	5.07	5.20
115	0.362	6.28	6.32	6.17	6.22	6.01	6.04	5.85	5.88	5.60	5.09	5.22
116	0.363	6.33	6.36	6.22	6.26	6.06	6.09	5.91	5.93	5.66	5.12	5.24
117	0.365	6.37	6.40	6.27	6.30	6.11	6.14	5.96	5.98	5.71	5.15	5.26
118	0.366	6.40	6.43	6.31	6.34	6.16	6.18	6.01	6.03	5.77	5.18	5.28
119	0.367	6.44	6.46	6.35	6.37	6.21	6.22	6.06	6.08	5.82	5.21	5.31
120	0.368	6.47	6.49	6.39	6.41	6.25	6.26	6.11	6.12	5.87	5.24	5.33
121	0.370	6.50	6.52	6.42	6.44	6.29	6.30	6.15	6.16	5.92	5.28	5.36
122	0.371	6.53	6.55	6.45	6.47	6.32	6.33	6.19	6.20	5.97	5.31	5.39
123	0.372	6.56	6.57	6.48	6.50	6.36	6.37	6.23	6.24	6.02	5.34	5.43
124	0.373	6.58	6.60	6.51	6.52	6.39	6.40	6.27	6.28	6.06	5.37	*5.47*
125	0.375	6.61	6.62	6.54	6.55	6.42	6.43	6.31	6.31	6.11	5.41	*5.50*
126	0.376	6.63	6.64	6.56	6.57	6.45	6.46	6.34	6.34	6.15	5.44	*5.54*
127	0.377	6.65	6.67	6.59	6.60	6.48	6.48	6.37	6.37	6.19	5.48	*5.58*
128	0.378	6.67	6.69	6.61	6.62	6.51	6.51	6.40	6.40	6.22	5.52	*5.62*
129	0.380	6.69	6.71	6.63	6.64	6.53	6.53	6.43	6.43	6.26	5.56	*5.66*
130	0.381	6.71	6.72	6.65	6.66	6.56	6.56	6.46	6.46	6.29	5.61	*5.70*
131	0.382	6.73	6.74	6.67	6.68	6.58	6.58	6.48	6.48	6.32	5.65	*5.75*
132	0.383	6.75	6.76	6.69	6.70	6.60	6.60	6.51	6.51	6.35	5.70	*5.79*
133	0.385	6.77	6.78	6.71	6.72	6.62	6.62	6.53	6.53	6.38	5.74	*5.84*
134	0.386	6.78	6.79	6.73	6.73	6.64	6.64	6.56	6.55	6.41	5.79	*5.89*
135	0.387	6.80	6.81	6.75	6.75	6.66	6.66	6.58	6.57	6.44	5.84	*5.93*
136	0.388	6.81	6.82	6.76	6.77	6.68	6.68	6.60	6.60	6.46	5.88	*5.98*
137	0.390	6.83	6.84	6.78	6.78	6.70	6.70	6.62	6.62	6.49	5.92	6.00
138	0.391	6.84	6.85	6.80	6.80	6.72	6.72	6.64	6.64	6.51	5.97	6.04
139	0.392	6.86	6.86	6.81	6.81	6.74	6.73	6.66	6.65	6.54	6.01	6.07
140	0.393	6.87	6.88	6.83	6.83	6.75	6.75	6.68	6.67	6.56	6.04	6.11
141	0.395	6.88	6.89	6.84	6.84	6.77	6.76	6.69	6.69	6.58	6.08	6.14
142	0.396	6.90	6.90	6.85	6.85	6.78	6.78	6.71	6.71	6.60	6.12	6.17
143	0.397	6.91	6.92	6.87	6.87	6.80	6.79	6.73	6.72	6.62	6.15	6.20
144	0.398	6.92	6.93	6.88	6.88	6.81	6.81	6.74	6.74	6.64	6.18	6.22
145	0.400	6.93	6.94	6.89	6.89	6.83	6.82	6.76	6.75	6.66	6.21	6.25
146	0.401	6.95	6.95	6.91	6.90	6.84	6.84	6.77	6.77	6.67	6.24	6.28
147	0.402	6.96	6.96	6.92	6.92	6.85	6.85	6.79	6.78	6.69	6.27	6.30
148	0.403	6.97	6.97	6.93	6.93	6.87	6.86	6.80	6.80	6.71	6.30	6.32
149	0.405	6.98	6.98	6.94	6.94	6.88	6.88	6.82	6.81	6.72	6.33	6.35
150	0.406	6.99	6.99	6.95	6.95	6.89	6.89	6.83	6.83	6.74	6.36	6.37
151	0.407	7.00	7.00	6.96	6.96	6.90	6.90	6.84	6.84	6.76	6.38	6.39
152	0.408	7.01	7.01	6.97	6.97	6.92	6.91	6.86	6.85	6.77	6.41	6.41
153	0.410	7.02	7.02	6.98	6.98	6.93	6.92	6.87	6.87	6.78	6.43	6.43
154	0.411	7.03	7.03	6.99	6.99	6.94	6.93	6.88	6.88	6.80	6.46	6.45

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	2.5 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
155	0.412	7.04	7.04	7.00	7.00	6.95	6.94	6.89	6.89	6.81	6.48	6.47
156	0.413	7.05	7.05	7.01	7.01	6.96	6.96	6.91	6.90	6.83	6.50	6.49
157	0.415	7.06	7.06	7.02	7.02	6.97	6.97	6.92	6.91	6.84	6.52	6.51
158	0.416	7.06	7.07	7.03	7.03	6.98	6.98	6.93	6.92	6.85	6.54	6.52
159	0.417	7.07	7.08	7.04	7.04	6.99	6.99	6.94	6.93	6.86	6.56	6.54
160	0.418	7.08	7.08	7.05	7.05	7.00	7.00	6.95	6.95	6.88	6.58	6.56
161	0.420	7.09	7.09	7.06	7.06	7.01	7.01	6.96	6.96	6.89	6.60	6.58
162	0.421	7.10	7.10	7.07	7.07	7.02	7.01	6.97	6.97	6.90	6.62	6.60
163	0.422	7.11	7.11	7.08	7.07	7.03	7.02	6.98	6.98	6.91	6.64	6.61
164	0.423	7.11	7.12	7.08	7.08	7.04	7.03	6.99	6.99	6.92	6.66	6.63
165	0.425	7.12	7.12	7.09	7.09	7.05	7.04	7.00	7.00	6.93	6.67	6.65
166	0.426	7.13	7.13	7.10	7.10	7.05	7.05	7.01	7.00	6.94	6.69	6.66
167	0.427	7.14	7.14	7.11	7.11	7.06	7.06	7.02	7.01	6.95	6.71	6.68
168	0.428	7.14	7.15	7.12	7.11	7.07	7.07	7.03	7.02	6.96	6.72	6.70
169	0.430	7.15	7.15	7.12	7.12	7.08	7.08	7.04	7.03	6.97	6.74	6.71
170	0.431	7.16	7.16	7.13	7.13	7.09	7.08	7.05	7.04	6.98	6.75	6.72
171	0.432	7.17	7.17	7.14	7.14	7.10	7.09	7.05	7.05	6.99	6.76	6.74
172	0.433	7.17	7.17	7.15	7.14	7.10	7.10	7.06	7.06	7.00	6.78	6.75
173	0.435	7.18	7.18	7.15	7.15	7.11	7.11	7.07	7.07	7.01	6.79	6.77
174	0.436	7.19	7.19	7.16	7.16	7.12	7.11	7.08	7.07	7.02	6.81	6.78
175	0.437	7.19	7.19	7.17	7.16	7.13	7.12	7.09	7.08	7.03	6.82	6.79
176	0.438	7.20	7.20	7.17	7.17	7.13	7.13	7.09	7.09	7.04	6.83	6.81
177	0.440	7.21	7.21	7.18	7.18	7.14	7.14	7.10	7.10	7.05	6.84	6.82
178	0.441	7.21	7.21	7.19	7.18	7.15	7.14	7.11	7.11	7.06	6.86	6.83
179	0.442	7.22	7.22	7.19	7.19	7.15	7.15	7.12	7.11	7.06	6.87	6.84
180	0.443	7.22	7.22	7.20	7.20	7.16	7.16	7.12	7.12	7.07	6.88	6.85
181	0.445	7.23	7.23	7.20	7.20	7.17	7.16	7.13	7.13	7.08	6.89	6.87
182	0.446	7.24	7.24	7.21	7.21	7.17	7.17	7.14	7.14	7.09	6.90	6.88
183	0.447	7.24	7.24	7.22	7.21	7.18	7.18	7.15	7.14	7.10	6.91	6.89
184	0.448	7.25	7.25	7.22	7.22	7.19	7.18	7.15	7.15	7.10	6.92	6.90
185	0.450	7.25	7.25	7.23	7.23	7.19	7.19	7.16	7.16	7.11	6.93	6.91
186	0.451	7.26	7.26	7.23	7.23	7.20	7.20	7.17	7.16	7.12	6.94	6.92
187	0.452	7.26	7.26	7.24	7.24	7.21	7.20	7.17	7.17	7.13	6.95	6.93
188	0.453	7.27	7.27	7.25	7.24	7.21	7.21	7.18	7.18	7.13	6.96	6.94
189	0.455	7.28	7.28	7.25	7.25	7.22	7.22	7.19	7.18	7.14	6.97	6.95
190	0.456	7.28	7.28	7.26	7.26	7.22	7.22	7.19	7.19	7.15	6.98	6.96
191	0.457	7.29	7.29	7.26	7.26	7.23	7.23	7.20	7.19	7.15	6.99	6.97
192	0.458	7.29	7.29	7.27	7.27	7.24	7.23	7.21	7.20	7.16	7.00	6.98
193	0.460	7.30	7.30	7.27	7.27	7.24	7.24	7.21	7.21	7.17	7.01	6.99
194	0.461	7.30	7.30	7.28	7.28	7.25	7.24	7.22	7.21	7.17	7.02	7.00
195	0.462	7.31	7.31	7.28	7.28	7.25	7.25	7.22	7.22	7.18	7.03	7.01
196	0.463	7.31	7.31	7.29	7.29	7.26	7.26	7.23	7.22	7.19	7.04	7.02
197	0.465	7.32	7.32	7.29	7.29	7.26	7.26	7.23	7.23	7.19	7.05	7.02
198	0.466	7.32	7.32	7.30	7.30	7.27	7.27	7.24	7.24	7.20	7.05	7.03
199	0.467	7.33	7.33	7.30	7.30	7.27	7.27	7.25	7.24	7.21	7.06	7.04
200	0.468	7.33	7.33	7.31	7.31	7.28	7.28	7.25	7.25	7.21	7.07	7.05
201	0.470	7.34	7.34	7.31	7.31	7.29	7.28	7.26	7.25	7.22	7.08	7.06

Table 3

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	2.5 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
1	0.000	3.50	3.51	3.50	3.51	3.50	3.51	3.50	3.51	3.50	3.49	3.51
2	0.221	3.93	3.93	3.92	3.93	3.92	3.93	3.92	3.93	3.92	3.90	3.94
3	0.222	3.93	3.94	3.93	3.93	3.92	3.93	3.93	3.94	3.93	3.90	3.95
4	0.224	3.94	3.94	3.93	3.94	3.93	3.94	3.93	3.94	3.93	3.90	3.95
5	0.225	3.94	3.95	3.93	3.94	3.93	3.94	3.94	3.95	3.94	3.91	3.96
6	0.226	3.95	3.95	3.94	3.95	3.94	3.95	3.94	3.95	3.94	3.91	3.96
7	0.227	3.95	3.96	3.94	3.95	3.94	3.95	3.95	3.96	3.94	3.92	3.97
8	0.229	3.96	3.96	3.95	3.96	3.95	3.96	3.95	3.96	3.95	3.92	3.97
9	0.230	3.96	3.97	3.95	3.96	3.95	3.96	3.95	3.97	3.95	3.92	3.98
10	0.231	3.97	3.97	3.96	3.97	3.95	3.97	3.96	3.97	3.96	3.93	3.98
11	0.232	3.97	3.98	3.96	3.97	3.96	3.97	3.96	3.98	3.96	3.93	3.99
12	0.234	3.98	3.98	3.97	3.98	3.96	3.98	3.97	3.98	3.97	3.94	3.99
13	0.235	3.98	3.99	3.97	3.98	3.97	3.98	3.97	3.99	3.97	3.94	4.00
14	0.236	3.99	3.99	3.98	3.99	3.97	3.99	3.98	3.99	3.98	3.95	4.00
15	0.237	3.99	4.00	3.98	3.99	3.98	3.99	3.98	4.00	3.98	3.95	4.01
16	0.239	4.00	4.00	3.99	4.00	3.98	4.00	3.99	4.00	3.99	3.96	4.01
17	0.240	4.00	4.01	3.99	4.00	3.99	4.00	3.99	4.01	3.99	3.96	4.02
18	0.241	4.01	4.01	4.00	4.01	3.99	4.01	4.00	4.01	4.00	3.97	4.02
19	0.242	4.01	4.02	4.00	4.01	4.00	4.01	4.00	4.02	4.00	3.97	4.03
20	0.244	4.02	4.02	4.01	4.02	4.00	4.02	4.01	4.02	4.01	3.97	4.03
21	0.245	4.02	4.03	4.01	4.02	4.01	4.02	4.01	4.03	4.01	3.98	4.04
22	0.246	4.03	4.03	4.02	4.03	4.01	4.03	4.02	4.03	4.02	3.98	4.04
23	0.247	4.03	4.04	4.02	4.03	4.02	4.03	4.02	4.04	4.02	3.99	4.05
24	0.249	4.04	4.04	4.03	4.04	4.03	4.04	4.03	4.04	4.03	3.99	4.05
25	0.250	4.04	4.05	4.03	4.05	4.03	4.04	4.04	4.05	4.03	4.00	4.06
26	0.251	4.05	4.06	4.04	4.05	4.04	4.05	4.04	4.06	4.04	4.00	4.06
27	0.252	4.06	4.06	4.05	4.06	4.04	4.06	4.05	4.06	4.04	4.01	4.07
28	0.253	4.06	4.07	4.05	4.06	4.05	4.06	4.05	4.07	4.05	4.01	4.08
29	0.255	4.07	4.07	4.06	4.07	4.05	4.07	4.06	4.07	4.06	4.02	4.08
30	0.256	4.07	4.08	4.06	4.07	4.06	4.07	4.06	4.08	4.06	4.02	4.09
31	0.257	4.08	4.09	4.07	4.08	4.06	4.08	4.07	4.09	4.07	4.03	4.09
32	0.258	4.09	4.09	4.08	4.09	4.07	4.09	4.08	4.09	4.07	4.04	4.10
33	0.260	4.09	4.10	4.08	4.09	4.08	4.09	4.08	4.10	4.08	4.04	4.11
34	0.261	4.10	4.11	4.09	4.10	4.08	4.10	4.09	4.10	4.09	4.05	4.11
35	0.262	4.11	4.11	4.09	4.11	4.09	4.10	4.09	4.11	4.09	4.05	4.12
36	0.263	4.11	4.12	4.10	4.11	4.10	4.11	4.10	4.12	4.10	4.06	4.13
37	0.265	4.12	4.13	4.11	4.12	4.10	4.12	4.11	4.12	4.10	4.06	4.13
38	0.266	4.13	4.13	4.11	4.13	4.11	4.12	4.11	4.13	4.11	4.07	4.14
39	0.267	4.13	4.14	4.12	4.13	4.12	4.13	4.12	4.14	4.12	4.08	4.15
40	0.268	4.14	4.15	4.13	4.14	4.12	4.14	4.13	4.14	4.12	4.08	4.15
41	0.270	4.15	4.15	4.13	4.15	4.13	4.14	4.13	4.15	4.13	4.09	4.16
42	0.271	4.15	4.16	4.14	4.15	4.14	4.15	4.14	4.16	4.14	4.09	4.17
43	0.272	4.16	4.17	4.15	4.16	4.14	4.16	4.15	4.17	4.14	4.10	4.17
44	0.273	4.17	4.18	4.16	4.17	4.15	4.17	4.16	4.17	4.15	4.11	4.18
45	0.275	4.18	4.19	4.16	4.18	4.16	4.17	4.16	4.18	4.16	4.11	4.19
46	0.276	4.18	4.19	4.17	4.19	4.16	4.18	4.17	4.19	4.17	4.12	4.20
47	0.277	4.19	4.20	4.18	4.19	4.17	4.19	4.18	4.20	4.17	4.13	4.20
48	0.278	4.20	4.21	4.19	4.20	4.18	4.20	4.19	4.20	4.18	4.13	4.21
49	0.280	4.21	4.22	4.19	4.21	4.19	4.21	4.19	4.21	4.19	4.14	4.22
50	0.281	4.22	4.23	4.20	4.22	4.19	4.21	4.20	4.22	4.20	4.15	4.23

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	2.5 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
51	0.282	4.23	4.23	4.21	4.23	4.20	4.22	4.21	4.23	4.20	4.15	4.24
52	0.283	4.23	4.24	4.22	4.23	4.21	4.23	4.22	4.24	4.21	4.16	4.25
53	0.285	4.24	4.25	4.23	4.24	4.22	4.24	4.22	4.25	4.22	4.17	4.25
54	0.286	4.25	4.26	4.24	4.25	4.23	4.25	4.23	4.26	4.23	4.18	4.26
55	0.287	4.26	4.27	4.25	4.26	4.24	4.26	4.24	4.26	4.24	4.18	4.27
56	0.288	4.27	4.28	4.25	4.27	4.25	4.27	4.25	4.27	4.25	4.19	4.28
57	0.290	4.28	4.29	4.26	4.28	4.25	4.27	4.26	4.28	4.25	4.20	4.29
58	0.291	4.29	4.30	4.27	4.29	4.26	4.28	4.27	4.29	4.26	4.21	4.30
59	0.292	4.30	4.31	4.28	4.30	4.27	4.29	4.28	4.30	4.27	4.21	4.31
60	0.293	4.31	4.32	4.29	4.31	4.28	4.30	4.29	4.31	4.28	4.22	4.32
61	0.295	4.32	4.33	4.30	4.32	4.29	4.31	4.30	4.32	4.29	4.23	4.33
62	0.296	4.33	4.34	4.31	4.33	4.30	4.32	4.31	4.33	4.30	4.24	4.34
63	0.297	4.34	4.35	4.32	4.34	4.31	4.33	4.32	4.34	4.31	4.25	4.35
64	0.298	4.35	4.37	4.33	4.35	4.32	4.35	4.33	4.35	4.32	4.25	4.36
65	0.300	4.37	4.38	4.35	4.36	4.33	4.36	4.34	4.36	4.33	4.26	4.37
66	0.301	4.38	4.39	4.36	4.38	4.34	4.37	4.35	4.38	4.34	4.27	4.38
67	0.302	4.39	4.40	4.37	4.39	4.35	4.38	4.36	4.39	4.35	4.28	4.39
68	0.303	4.40	4.42	4.38	4.40	4.37	4.39	4.37	4.40	4.36	4.29	4.40
69	0.305	4.41	4.43	4.39	4.41	4.38	4.40	4.38	4.41	4.37	4.30	4.41
70	0.306	4.43	4.44	4.40	4.43	4.39	4.42	4.39	4.42	4.39	4.31	4.42
71	0.307	4.44	4.46	4.42	4.44	4.40	4.43	4.41	4.44	4.40	4.32	4.44
72	0.308	4.46	4.47	4.43	4.45	4.41	4.44	4.42	4.45	4.41	4.33	4.45
73	0.310	4.47	4.49	4.44	4.47	4.43	4.46	4.43	4.46	4.42	4.34	4.46
74	0.311	4.48	4.50	4.46	4.48	4.44	4.47	4.45	4.48	4.44	4.35	4.47
75	0.312	4.50	4.52	4.47	4.50	4.45	4.48	4.46	4.49	4.45	4.36	4.49
76	0.313	4.52	4.53	4.49	4.51	4.47	4.50	4.47	4.51	4.46	4.37	4.50
77	0.315	4.53	4.55	4.50	4.53	4.48	4.51	4.49	4.52	4.48	4.38	4.51
78	0.316	4.55	4.57	4.52	4.55	4.50	4.53	4.50	4.54	4.49	4.39	4.53
79	0.317	4.57	4.59	4.54	4.56	4.51	4.55	4.52	4.55	4.50	4.41	4.54
80	0.318	4.58	4.61	4.55	4.58	4.53	4.56	4.53	4.57	4.52	4.42	4.56
81	0.320	4.60	4.63	4.57	4.60	4.55	4.58	4.55	4.59	4.53	4.43	4.57
82	0.321	4.62	4.65	4.59	4.62	4.56	4.60	4.57	4.61	4.55	4.44	4.59
83	0.322	4.64	4.67	4.61	4.64	4.58	4.62	4.58	4.62	4.57	4.46	4.60
84	0.323	4.67	4.69	4.63	4.66	4.60	4.64	4.60	4.64	4.58	4.47	4.62
85	0.325	4.69	4.71	4.65	4.68	4.62	4.66	4.62	4.66	4.60	4.48	4.63
86	0.326	4.71	4.74	4.67	4.71	4.64	4.68	4.64	4.68	4.62	4.50	4.65
87	0.327	4.74	4.77	4.69	4.73	4.66	4.70	4.66	4.71	4.64	4.51	4.67
88	0.328	4.76	4.79	4.72	4.76	4.68	4.72	4.68	4.73	4.66	4.52	4.68
89	0.330	4.79	4.82	4.74	4.78	4.70	4.75	4.70	4.75	4.68	4.54	4.70
90	0.331	4.82	4.85	4.77	4.81	4.73	4.77	4.72	4.78	4.70	4.55	4.72
91	0.332	4.85	4.89	4.80	4.84	4.75	4.80	4.75	4.80	4.72	4.57	4.74
92	0.333	4.89	4.92	4.83	4.87	4.78	4.83	4.77	4.83	4.74	4.59	4.75
93	0.335	4.92	4.96	4.86	4.91	4.81	4.86	4.80	4.85	4.76	4.60	4.77
94	0.336	4.96	5.00	4.89	4.94	4.84	4.89	4.83	4.88	4.79	4.62	4.79
95	0.337	5.00	5.04	4.93	4.98	4.87	4.92	4.86	4.91	4.81	4.64	4.81
96	0.338	5.04	5.09	4.96	5.02	4.90	4.96	4.89	4.95	4.84	4.65	4.83
97	0.340	5.09	5.14	5.01	5.07	4.94	5.00	4.92	4.98	4.87	4.67	4.85
98	0.341	5.14	5.20	5.05	5.12	4.97	5.04	4.95	5.01	4.89	4.69	4.87
99	0.342	5.20	5.26	5.10	5.17	5.01	5.08	4.99	5.05	4.92	4.71	4.89
100	0.343	5.26	5.32	5.15	5.23	5.06	5.13	5.02	5.09	4.95	4.73	4.91
101	0.345	5.32	5.39	5.20	5.29	5.10	5.18	5.06	5.13	4.99	4.75	4.93
102	0.346	5.39	5.47	5.26	5.35	5.15	5.23	5.11	5.17	5.02	4.77	4.96

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	2.5 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
103	0.347	5.47	5.55	5.33	5.42	5.21	5.28	5.15	5.22	5.05	4.79	4.98
104	0.348	5.55	5.63	5.40	5.50	5.26	5.34	5.20	5.27	5.09	4.81	5.00
105	0.350	5.63	5.71	5.47	5.57	5.32	5.41	5.25	5.32	5.13	4.84	5.02
106	0.351	5.71	5.79	5.55	5.65	5.39	5.47	5.30	5.37	5.17	4.86	5.04
107	0.352	5.79	5.86	5.63	5.73	5.46	5.54	5.36	5.42	5.21	4.88	5.06
108	0.353	5.87	5.94	5.71	5.80	5.53	5.61	5.42	5.48	5.25	4.91	5.08
109	0.355	5.94	6.01	5.79	5.87	5.60	5.67	5.48	5.54	5.30	4.93	5.10
110	0.356	6.01	6.07	5.86	5.94	5.68	5.74	5.54	5.59	5.35	4.96	5.12
111	0.357	6.08	6.13	5.93	6.00	5.75	5.81	5.60	5.65	5.39	4.98	5.14
112	0.358	6.14	6.18	6.00	6.06	5.82	5.87	5.67	5.71	5.45	5.01	5.16
113	0.360	6.19	6.23	6.06	6.12	5.88	5.93	5.73	5.77	5.50	5.04	5.18
114	0.361	6.24	6.28	6.12	6.17	5.95	5.99	5.79	5.83	5.55	5.07	5.20
115	0.362	6.28	6.32	6.17	6.22	6.01	6.04	5.85	5.88	5.60	5.09	5.22
116	0.363	6.33	6.36	6.22	6.26	6.06	6.09	5.91	5.93	5.66	5.12	5.24
117	0.365	6.37	6.40	6.27	6.30	6.11	6.14	5.96	5.98	5.71	5.15	5.26
118	0.366	6.40	6.43	6.31	6.34	6.16	6.18	6.01	6.03	5.77	5.18	5.28
119	0.367	6.44	6.46	6.35	6.37	6.21	6.22	6.06	6.08	5.82	5.21	5.31
120	0.368	6.47	6.49	6.39	6.41	6.25	6.26	6.11	6.12	5.87	5.24	5.33
121	0.370	6.50	6.52	6.42	6.44	6.29	6.30	6.15	6.16	5.92	5.28	5.36
122	0.371	6.53	6.55	6.45	6.47	6.32	6.33	6.19	6.20	5.97	5.31	5.39
123	0.372	6.56	6.57	6.48	6.50	6.36	6.37	6.23	6.24	6.02	5.34	5.43
124	0.373	6.58	6.60	6.51	6.52	6.39	6.40	6.27	6.28	6.06	5.37	*5.47*
125	0.375	6.61	6.62	6.54	6.55	6.42	6.43	6.31	6.31	6.11	5.41	*5.50*
126	0.376	6.63	6.64	6.56	6.57	6.45	6.46	6.34	6.34	6.15	5.44	*5.54*
127	0.377	6.65	6.67	6.59	6.60	6.48	6.48	6.37	6.37	6.19	5.48	*5.58*
128	0.378	6.67	6.69	6.61	6.62	6.51	6.51	6.40	6.40	6.22	5.52	*5.62*
129	0.380	6.69	6.71	6.63	6.64	6.53	6.53	6.43	6.43	6.26	5.56	*5.66*
130	0.381	6.71	6.72	6.65	6.66	6.56	6.56	6.46	6.46	6.29	5.61	*5.70*
131	0.382	6.73	6.74	6.67	6.68	6.58	6.58	6.48	6.48	6.32	5.65	*5.75*
132	0.383	6.75	6.76	6.69	6.70	6.60	6.60	6.51	6.51	6.35	5.70	*5.79*
133	0.385	6.77	6.78	6.71	6.72	6.62	6.62	6.53	6.53	6.38	5.74	*5.84*
134	0.386	6.78	6.79	6.73	6.73	6.64	6.64	6.56	6.55	6.41	5.79	*5.89*
135	0.387	6.80	6.81	6.75	6.75	6.66	6.66	6.58	6.57	6.44	5.84	*5.93*
136	0.388	6.81	6.82	6.76	6.77	6.68	6.68	6.60	6.60	6.46	5.88	*5.98*
137	0.390	6.83	6.84	6.78	6.78	6.70	6.70	6.62	6.62	6.49	5.92	6.00
138	0.391	6.84	6.85	6.80	6.80	6.72	6.72	6.64	6.64	6.51	5.97	6.04
139	0.392	6.86	6.86	6.81	6.81	6.74	6.73	6.66	6.65	6.54	6.01	6.07
140	0.393	6.87	6.88	6.83	6.83	6.75	6.75	6.68	6.67	6.56	6.04	6.11
141	0.395	6.88	6.89	6.84	6.84	6.77	6.76	6.69	6.69	6.58	6.08	6.14
142	0.396	6.90	6.90	6.85	6.85	6.78	6.78	6.71	6.71	6.60	6.12	6.17
143	0.397	6.91	6.92	6.87	6.87	6.80	6.79	6.73	6.72	6.62	6.15	6.20
144	0.398	6.92	6.93	6.88	6.88	6.81	6.81	6.74	6.74	6.64	6.18	6.22
145	0.400	6.93	6.94	6.89	6.89	6.83	6.82	6.76	6.75	6.66	6.21	6.25
146	0.401	6.95	6.95	6.91	6.90	6.84	6.84	6.77	6.77	6.67	6.24	6.28
147	0.402	6.96	6.96	6.92	6.92	6.85	6.85	6.79	6.78	6.69	6.27	6.30
148	0.403	6.97	6.97	6.93	6.93	6.87	6.86	6.80	6.80	6.71	6.30	6.32
149	0.405	6.98	6.98	6.94	6.94	6.88	6.88	6.82	6.81	6.72	6.33	6.35
150	0.406	6.99	6.99	6.95	6.95	6.89	6.89	6.83	6.83	6.74	6.36	6.37
151	0.407	7.00	7.00	6.96	6.96	6.90	6.90	6.84	6.84	6.76	6.38	6.39
152	0.408	7.01	7.01	6.97	6.97	6.92	6.91	6.86	6.85	6.77	6.41	6.41
153	0.410	7.02	7.02	6.98	6.98	6.93	6.92	6.87	6.87	6.78	6.43	6.43
154	0.411	7.03	7.03	6.99	6.99	6.94	6.93	6.88	6.88	6.80	6.46	6.45

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	2.5 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
155	0.412	7.04	7.04	7.00	7.00	6.95	6.94	6.89	6.89	6.81	6.48	6.47
156	0.413	7.05	7.05	7.01	7.01	6.96	6.96	6.91	6.90	6.83	6.50	6.49
157	0.415	7.06	7.06	7.02	7.02	6.97	6.97	6.92	6.91	6.84	6.52	6.51
158	0.416	7.06	7.07	7.03	7.03	6.98	6.98	6.93	6.92	6.85	6.54	6.52
159	0.417	7.07	7.08	7.04	7.04	6.99	6.99	6.94	6.93	6.86	6.56	6.54
160	0.418	7.08	7.08	7.05	7.05	7.00	7.00	6.95	6.95	6.88	6.58	6.56
161	0.420	7.09	7.09	7.06	7.06	7.01	7.01	6.96	6.96	6.89	6.60	6.58
162	0.421	7.10	7.10	7.07	7.07	7.02	7.01	6.97	6.97	6.90	6.62	6.60
163	0.422	7.11	7.11	7.08	7.07	7.03	7.02	6.98	6.98	6.91	6.64	6.61
164	0.423	7.11	7.12	7.08	7.08	7.04	7.03	6.99	6.99	6.92	6.66	6.63
165	0.425	7.12	7.12	7.09	7.09	7.05	7.04	7.00	7.00	6.93	6.67	6.65
166	0.426	7.13	7.13	7.10	7.10	7.05	7.05	7.01	7.00	6.94	6.69	6.66
167	0.427	7.14	7.14	7.11	7.11	7.06	7.06	7.02	7.01	6.95	6.71	6.68
168	0.428	7.14	7.15	7.12	7.11	7.07	7.07	7.03	7.02	6.96	6.72	6.70
169	0.430	7.15	7.15	7.12	7.12	7.08	7.08	7.04	7.03	6.97	6.74	6.71
170	0.431	7.16	7.16	7.13	7.13	7.09	7.08	7.05	7.04	6.98	6.75	6.72
171	0.432	7.17	7.17	7.14	7.14	7.10	7.09	7.05	7.05	6.99	6.76	6.74
172	0.433	7.17	7.17	7.15	7.14	7.10	7.10	7.06	7.06	7.00	6.78	6.75
173	0.435	7.18	7.18	7.15	7.15	7.11	7.11	7.07	7.07	7.01	6.79	6.77
174	0.436	7.19	7.19	7.16	7.16	7.12	7.11	7.08	7.07	7.02	6.81	6.78
175	0.437	7.19	7.19	7.17	7.16	7.13	7.12	7.09	7.08	7.03	6.82	6.79
176	0.438	7.20	7.20	7.17	7.17	7.13	7.13	7.09	7.09	7.04	6.83	6.81
177	0.440	7.21	7.21	7.18	7.18	7.14	7.14	7.10	7.10	7.05	6.84	6.82
178	0.441	7.21	7.21	7.19	7.18	7.15	7.14	7.11	7.11	7.06	6.86	6.83
179	0.442	7.22	7.22	7.19	7.19	7.15	7.15	7.12	7.11	7.06	6.87	6.84
180	0.443	7.22	7.22	7.20	7.20	7.16	7.16	7.12	7.12	7.07	6.88	6.85
181	0.445	7.23	7.23	7.20	7.20	7.17	7.16	7.13	7.13	7.08	6.89	6.87
182	0.446	7.24	7.24	7.21	7.21	7.17	7.17	7.14	7.14	7.09	6.90	6.88
183	0.447	7.24	7.24	7.22	7.21	7.18	7.18	7.15	7.14	7.10	6.91	6.89
184	0.448	7.25	7.25	7.22	7.22	7.19	7.18	7.15	7.15	7.10	6.92	6.90
185	0.450	7.25	7.25	7.23	7.23	7.19	7.19	7.16	7.16	7.11	6.93	6.91
186	0.451	7.26	7.26	7.23	7.23	7.20	7.20	7.17	7.16	7.12	6.94	6.92
187	0.452	7.26	7.26	7.24	7.24	7.21	7.20	7.17	7.17	7.13	6.95	6.93
188	0.453	7.27	7.27	7.25	7.24	7.21	7.21	7.18	7.18	7.13	6.96	6.94
189	0.455	7.28	7.28	7.25	7.25	7.22	7.22	7.19	7.18	7.14	6.97	6.95
190	0.456	7.28	7.28	7.26	7.26	7.22	7.22	7.19	7.19	7.15	6.98	6.96
191	0.457	7.29	7.29	7.26	7.26	7.23	7.23	7.20	7.19	7.15	6.99	6.97
192	0.458	7.29	7.29	7.27	7.27	7.24	7.23	7.21	7.20	7.16	7.00	6.98
193	0.460	7.30	7.30	7.27	7.27	7.24	7.24	7.21	7.21	7.17	7.01	6.99
194	0.461	7.30	7.30	7.28	7.28	7.25	7.24	7.22	7.21	7.17	7.02	7.00
195	0.462	7.31	7.31	7.28	7.28	7.25	7.25	7.22	7.22	7.18	7.03	7.01
196	0.463	7.31	7.31	7.29	7.29	7.26	7.26	7.23	7.22	7.19	7.04	7.02
197	0.465	7.32	7.32	7.29	7.29	7.26	7.26	7.23	7.23	7.19	7.05	7.02
198	0.466	7.32	7.32	7.30	7.30	7.27	7.27	7.24	7.24	7.20	7.05	7.03
199	0.467	7.33	7.33	7.30	7.30	7.27	7.27	7.25	7.24	7.21	7.06	7.04
200	0.468	7.33	7.33	7.31	7.31	7.28	7.28	7.25	7.25	7.21	7.07	7.05
201	0.470	7.34	7.34	7.31	7.31	7.29	7.28	7.26	7.25	7.22	7.08	7.06

Table 4

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	5.0 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
1	0.000	3.51	3.49	3.51	3.51	3.51	3.52	3.52	3.52	3.53	3.55	3.57
2	0.221	3.92	3.89	3.93	3.94	3.94	3.95	3.96	3.97	3.98	4.03	4.08
3	0.222	3.93	3.89	3.94	3.94	3.95	3.96	3.96	3.97	3.98	4.03	4.09
4	0.224	3.93	3.90	3.94	3.95	3.95	3.96	3.97	3.98	3.99	4.04	4.09
5	0.225	3.94	3.90	3.95	3.95	3.96	3.97	3.97	3.98	3.99	4.04	4.10
6	0.226	3.94	3.91	3.95	3.96	3.96	3.97	3.98	3.99	4.00	4.05	4.11
7	0.227	3.95	3.91	3.95	3.96	3.97	3.97	3.98	3.99	4.00	4.05	4.11
8	0.229	3.95	3.92	3.96	3.96	3.97	3.98	3.99	4.00	4.01	4.06	4.12
9	0.230	3.95	3.92	3.96	3.97	3.98	3.98	3.99	4.00	4.01	4.06	4.13
10	0.231	3.96	3.92	3.97	3.97	3.98	3.99	4.00	4.01	4.02	4.07	4.13
11	0.232	3.96	3.93	3.97	3.98	3.99	3.99	4.00	4.01	4.02	4.08	4.14
12	0.234	3.97	3.93	3.98	3.98	3.99	4.00	4.01	4.02	4.03	4.08	4.15
13	0.235	3.97	3.94	3.98	3.99	4.00	4.00	4.01	4.02	4.03	4.09	4.15
14	0.236	3.98	3.94	3.99	3.99	4.00	4.01	4.02	4.03	4.04	4.09	4.16
15	0.237	3.98	3.95	3.99	4.00	4.01	4.01	4.02	4.03	4.05	4.10	4.17
16	0.239	3.99	3.95	4.00	4.00	4.01	4.02	4.03	4.04	4.05	4.11	4.17
17	0.240	3.99	3.95	4.00	4.01	4.02	4.03	4.03	4.05	4.06	4.11	4.18
18	0.241	4.00	3.96	4.01	4.01	4.02	4.03	4.04	4.05	4.06	4.12	4.19
19	0.242	4.00	3.96	4.01	4.02	4.03	4.04	4.05	4.06	4.07	4.12	4.19
20	0.244	4.01	3.97	4.02	4.03	4.03	4.04	4.05	4.06	4.07	4.13	4.20
21	0.245	4.01	3.97	4.02	4.03	4.04	4.05	4.06	4.07	4.08	4.14	4.21
22	0.246	4.02	3.98	4.03	4.04	4.04	4.05	4.06	4.07	4.09	4.14	4.22
23	0.247	4.02	3.98	4.03	4.04	4.05	4.06	4.07	4.08	4.09	4.15	4.22
24	0.249	4.03	3.99	4.04	4.05	4.06	4.06	4.07	4.09	4.10	4.16	4.23
25	0.250	4.03	3.99	4.05	4.05	4.06	4.07	4.08	4.09	4.10	4.17	4.24
26	0.251	4.04	4.00	4.05	4.06	4.07	4.08	4.09	4.10	4.11	4.17	4.25
27	0.252	4.05	4.00	4.06	4.06	4.07	4.08	4.09	4.10	4.12	4.18	4.26
28	0.253	4.05	4.01	4.06	4.07	4.08	4.09	4.10	4.11	4.12	4.19	4.26
29	0.255	4.06	4.01	4.07	4.08	4.08	4.09	4.11	4.12	4.13	4.19	4.27
30	0.256	4.06	4.02	4.07	4.08	4.09	4.10	4.11	4.12	4.14	4.20	4.28
31	0.257	4.07	4.02	4.08	4.09	4.10	4.11	4.12	4.13	4.14	4.21	4.29
32	0.258	4.07	4.03	4.09	4.09	4.10	4.11	4.12	4.14	4.15	4.22	4.30
33	0.260	4.08	4.03	4.09	4.10	4.11	4.12	4.13	4.14	4.16	4.22	4.31
34	0.261	4.09	4.04	4.10	4.11	4.12	4.13	4.14	4.15	4.16	4.23	4.32
35	0.262	4.09	4.05	4.10	4.11	4.12	4.13	4.14	4.16	4.17	4.24	4.33
36	0.263	4.10	4.05	4.11	4.12	4.13	4.14	4.15	4.16	4.18	4.25	4.34
37	0.265	4.10	4.06	4.12	4.13	4.14	4.15	4.16	4.17	4.19	4.26	4.35
38	0.266	4.11	4.06	4.12	4.13	4.14	4.15	4.17	4.18	4.19	4.27	4.36
39	0.267	4.12	4.07	4.13	4.14	4.15	4.16	4.17	4.19	4.20	4.27	4.37
40	0.268	4.12	4.07	4.14	4.15	4.16	4.17	4.18	4.19	4.21	4.28	4.38
41	0.270	4.13	4.08	4.14	4.15	4.16	4.18	4.19	4.20	4.22	4.29	4.39
42	0.271	4.14	4.09	4.15	4.16	4.17	4.18	4.20	4.21	4.23	4.30	4.40
43	0.272	4.14	4.09	4.16	4.17	4.18	4.19	4.20	4.22	4.23	4.31	4.41
44	0.273	4.15	4.10	4.17	4.18	4.19	4.20	4.21	4.23	4.24	4.32	4.42
45	0.275	4.16	4.10	4.17	4.18	4.19	4.21	4.22	4.23	4.25	4.33	4.43
46	0.276	4.17	4.11	4.18	4.19	4.20	4.21	4.23	4.24	4.26	4.34	4.44
47	0.277	4.17	4.12	4.19	4.20	4.21	4.22	4.24	4.25	4.27	4.35	4.46
48	0.278	4.18	4.12	4.20	4.21	4.22	4.23	4.24	4.26	4.28	4.36	4.47
49	0.280	4.19	4.13	4.20	4.21	4.23	4.24	4.25	4.27	4.29	4.37	4.48
50	0.281	4.20	4.14	4.21	4.22	4.23	4.25	4.26	4.28	4.29	4.38	4.49

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	5.0 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
51	0.282	4.20	4.14	4.22	4.23	4.24	4.26	4.27	4.29	4.30	4.39	4.51
52	0.283	4.21	4.15	4.23	4.24	4.25	4.27	4.28	4.30	4.31	4.40	4.52
53	0.285	4.22	4.16	4.24	4.25	4.26	4.27	4.29	4.31	4.32	4.42	4.53
54	0.286	4.23	4.17	4.25	4.26	4.27	4.28	4.30	4.32	4.33	4.43	4.55
55	0.287	4.24	4.17	4.25	4.27	4.28	4.29	4.31	4.33	4.34	4.44	4.56
56	0.288	4.24	4.18	4.26	4.28	4.29	4.30	4.32	4.34	4.35	4.45	4.58
57	0.290	4.25	4.19	4.27	4.28	4.30	4.31	4.33	4.35	4.37	4.46	4.59
58	0.291	4.26	4.20	4.28	4.29	4.31	4.32	4.34	4.36	4.38	4.48	4.61
59	0.292	4.27	4.20	4.29	4.30	4.32	4.33	4.35	4.37	4.39	4.49	4.62
60	0.293	4.28	4.21	4.30	4.31	4.33	4.34	4.36	4.38	4.40	4.50	4.64
61	0.295	4.29	4.22	4.31	4.32	4.34	4.35	4.37	4.39	4.41	4.52	4.66
62	0.296	4.30	4.23	4.32	4.33	4.35	4.36	4.38	4.40	4.42	4.53	4.67
63	0.297	4.31	4.24	4.33	4.34	4.36	4.38	4.39	4.41	4.44	4.55	4.69
64	0.298	4.32	4.24	4.34	4.35	4.37	4.39	4.41	4.43	4.45	4.56	4.71
65	0.300	4.33	4.25	4.35	4.37	4.38	4.40	4.42	4.44	4.46	4.58	4.73
66	0.301	4.34	4.26	4.36	4.38	4.39	4.41	4.43	4.45	4.47	4.59	4.75
67	0.302	4.35	4.27	4.37	4.39	4.40	4.42	4.44	4.46	4.49	4.61	4.77
68	0.303	4.36	4.28	4.38	4.40	4.42	4.44	4.46	4.48	4.50	4.63	4.79
69	0.305	4.37	4.29	4.40	4.41	4.43	4.45	4.47	4.49	4.52	4.64	4.81
70	0.306	4.38	4.30	4.41	4.42	4.44	4.46	4.48	4.51	4.53	4.66	4.83
71	0.307	4.39	4.31	4.42	4.44	4.46	4.48	4.50	4.52	4.55	4.68	4.85
72	0.308	4.41	4.32	4.43	4.45	4.47	4.49	4.51	4.54	4.56	4.70	4.87
73	0.310	4.42	4.33	4.45	4.46	4.48	4.50	4.53	4.55	4.58	4.72	4.90
74	0.311	4.43	4.34	4.46	4.48	4.50	4.52	4.54	4.57	4.60	4.74	4.92
75	0.312	4.44	4.35	4.47	4.49	4.51	4.53	4.56	4.58	4.61	4.76	4.94
76	0.313	4.46	4.36	4.49	4.51	4.53	4.55	4.57	4.60	4.63	4.78	4.97
77	0.315	4.47	4.37	4.50	4.52	4.54	4.57	4.59	4.62	4.65	4.81	4.99
78	0.316	4.48	4.38	4.52	4.54	4.56	4.58	4.61	4.64	4.67	4.83	5.02
79	0.317	4.50	4.39	4.53	4.55	4.58	4.60	4.63	4.66	4.69	4.86	5.05
80	0.318	4.51	4.41	4.55	4.57	4.59	4.62	4.65	4.68	4.71	4.88	5.07
81	0.320	4.53	4.42	4.56	4.59	4.61	4.64	4.67	4.70	4.73	4.91	5.10
82	0.321	4.54	4.43	4.58	4.60	4.63	4.66	4.69	4.72	4.76	4.94	5.13
83	0.322	4.56	4.44	4.60	4.62	4.65	4.68	4.71	4.74	4.78	4.96	5.16
84	0.323	4.58	4.46	4.61	4.64	4.67	4.70	4.73	4.77	4.80	4.99	5.19
85	0.325	4.59	4.47	4.63	4.66	4.69	4.72	4.75	4.79	4.83	5.03	5.22
86	0.326	4.61	4.48	4.65	4.68	4.71	4.74	4.78	4.82	4.86	5.06	5.25
87	0.327	4.63	4.50	4.67	4.70	4.73	4.77	4.80	4.84	4.89	5.09	5.29
88	0.328	4.65	4.51	4.69	4.72	4.76	4.79	4.83	4.87	4.92	5.13	5.32
89	0.330	4.67	4.53	4.72	4.75	4.78	4.82	4.86	4.90	4.95	5.16	5.35
90	0.331	4.69	4.54	4.74	4.77	4.80	4.84	4.88	4.93	4.98	5.20	5.39
91	0.332	4.71	4.56	4.76	4.79	4.83	4.87	4.91	4.96	5.01	5.24	5.42
92	0.333	4.73	4.58	4.79	4.82	4.86	4.90	4.95	5.00	5.05	5.28	5.46
93	0.335	4.76	4.59	4.81	4.85	4.89	4.93	4.98	5.03	5.09	5.32	5.50
94	0.336	4.78	4.61	4.84	4.88	4.92	4.97	5.02	5.07	5.13	5.37	5.53
95	0.337	4.81	4.63	4.87	4.91	4.95	5.00	5.05	5.11	5.17	5.41	5.57
96	0.338	4.83	4.65	4.90	4.94	4.98	5.04	5.09	5.15	5.22	5.45	5.61
97	0.340	4.86	4.67	4.93	4.97	5.02	5.07	5.13	5.20	5.26	5.50	5.65
98	0.341	4.89	4.69	4.96	5.01	5.06	5.12	5.18	5.24	5.31	5.55	5.68
99	0.342	4.92	4.71	4.99	5.04	5.10	5.16	5.22	5.29	5.36	5.59	5.72
100	0.343	4.96	4.73	5.03	5.08	5.14	5.20	5.27	5.34	5.41	5.64	5.76
101	0.345	4.99	4.76	5.07	5.12	5.18	5.25	5.32	5.39	5.47	5.68	5.80
102	0.346	5.03	4.78	5.11	5.17	5.23	5.30	5.38	5.45	5.52	5.73	5.84

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	5.0 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
103	0.347	5.07	4.81	5.15	5.21	5.28	5.35	5.43	5.51	5.58	5.78	5.87
104	0.348	5.11	4.83	5.20	5.26	5.33	5.41	5.49	5.56	5.63	5.82	5.91
105	0.350	5.15	4.86	5.25	5.31	5.39	5.47	5.54	5.62	5.69	5.86	5.95
106	0.351	5.20	4.89	5.30	5.37	5.44	5.52	5.60	5.68	5.74	5.90	5.98
107	0.352	5.25	4.92	5.35	5.42	5.50	5.58	5.66	5.73	5.80	5.95	6.02
108	0.353	5.30	4.96	5.41	5.48	5.56	5.64	5.72	5.79	5.85	5.99	6.05
109	0.355	5.35	4.99	5.47	5.54	5.62	5.70	5.78	5.84	5.90	6.02	6.08
110	0.356	5.41	5.03	5.53	5.60	5.69	5.76	5.84	5.90	5.95	6.06	6.11
111	0.357	5.47	5.07	5.59	5.67	5.75	5.82	5.89	5.95	5.99	6.10	6.14
112	0.358	5.53	5.11	5.65	5.73	5.81	5.88	5.94	6.00	6.04	6.13	6.17
113	0.360	5.59	5.15	5.71	5.79	5.87	5.94	5.99	6.04	6.08	6.16	6.20
114	0.361	5.66	5.20	5.78	5.85	5.92	5.99	6.04	6.09	6.12	6.20	6.23
115	0.362	5.72	5.24	5.84	5.91	5.98	6.04	6.09	6.13	6.16	6.23	6.25
116	0.363	5.79	5.30	5.90	5.96	6.03	6.09	6.13	6.17	6.20	6.26	6.28
117	0.365	5.85	5.35	5.95	6.02	6.08	6.13	6.17	6.21	6.23	6.28	6.30
118	0.366	5.91	5.41	6.01	6.07	6.13	6.17	6.21	6.24	6.27	6.31	6.33
119	0.367	5.97	5.47	6.06	6.12	6.17	6.22	6.25	6.28	6.30	6.34	6.35
120	0.368	6.02	5.53	6.11	6.16	6.21	6.25	6.29	6.31	6.33	6.36	6.37
121	0.370	6.08	5.59	6.16	6.21	6.25	6.29	6.32	6.34	6.36	6.39	6.40
122	0.371	6.13	5.66	6.20	6.25	6.29	6.33	6.35	6.37	6.39	6.41	6.42
123	0.372	6.17	5.72	6.24	6.29	6.33	6.36	6.38	6.40	6.41	6.44	6.44
124	0.373	6.22	5.78	6.28	6.32	6.36	6.39	6.41	6.43	6.44	6.46	*6.46*
125	0.375	6.26	5.85	6.32	6.36	6.39	6.42	6.44	6.45	6.46	6.48	*6.48*
126	0.376	6.30	5.91	6.36	6.39	6.42	6.45	6.47	6.48	6.49	6.50	*6.50*
127	0.377	6.34	5.97	6.39	6.42	6.45	6.47	6.49	6.50	6.51	6.52	*6.52*
128	0.378	6.37	6.02	6.42	6.45	6.48	6.50	6.51	6.52	6.53	6.54	*6.54*
129	0.380	6.41	6.07	6.45	6.48	6.51	6.53	6.54	6.55	6.55	6.56	*6.55*
130	0.381	6.44	6.12	6.48	6.51	6.53	6.55	6.56	6.57	6.57	6.58	*6.57*
131	0.382	6.47	6.17	6.51	6.54	6.56	6.57	6.58	6.59	6.59	6.60	*6.59*
132	0.383	6.50	6.22	6.54	6.56	6.58	6.59	6.60	6.61	6.61	6.61	*6.61*
133	0.385	6.52	6.26	6.56	6.58	6.60	6.61	6.62	6.63	6.63	6.63	*6.62*
134	0.386	6.55	6.30	6.58	6.61	6.62	6.63	6.64	6.65	6.65	6.65	*6.64*
135	0.387	6.57	6.34	6.61	6.63	6.64	6.65	6.66	6.66	6.67	6.66	*6.65*
136	0.388	6.60	6.37	6.63	6.65	6.66	6.67	6.68	6.68	6.68	6.68	*6.67*
137	0.390	6.62	6.40	6.65	6.67	6.68	6.69	6.70	6.70	6.70	6.70	6.68
138	0.391	6.64	6.44	6.67	6.69	6.70	6.71	6.71	6.72	6.72	6.71	6.70
139	0.392	6.66	6.47	6.69	6.71	6.72	6.72	6.73	6.73	6.73	6.73	6.71
140	0.393	6.68	6.49	6.71	6.72	6.73	6.74	6.74	6.75	6.75	6.74	6.73
141	0.395	6.70	6.52	6.73	6.74	6.75	6.76	6.76	6.76	6.76	6.75	6.74
142	0.396	6.72	6.55	6.74	6.76	6.77	6.77	6.78	6.78	6.78	6.77	6.75
143	0.397	6.74	6.57	6.76	6.77	6.78	6.79	6.79	6.79	6.79	6.78	6.77
144	0.398	6.76	6.60	6.78	6.79	6.80	6.80	6.80	6.80	6.80	6.79	6.78
145	0.400	6.77	6.62	6.79	6.80	6.81	6.82	6.82	6.82	6.82	6.81	6.79
146	0.401	6.79	6.64	6.81	6.82	6.83	6.83	6.83	6.83	6.83	6.82	6.80
147	0.402	6.80	6.66	6.82	6.83	6.84	6.84	6.84	6.84	6.84	6.83	6.82
148	0.403	6.82	6.68	6.84	6.85	6.85	6.86	6.86	6.86	6.85	6.84	6.83
149	0.405	6.83	6.70	6.85	6.86	6.87	6.87	6.87	6.87	6.87	6.85	6.84
150	0.406	6.85	6.72	6.86	6.87	6.88	6.88	6.88	6.88	6.88	6.87	6.85
151	0.407	6.86	6.74	6.88	6.89	6.89	6.89	6.89	6.89	6.89	6.88	6.86
152	0.408	6.87	6.75	6.89	6.90	6.90	6.90	6.90	6.90	6.90	6.89	6.87
153	0.410	6.89	6.77	6.90	6.91	6.91	6.92	6.92	6.91	6.91	6.90	6.88
154	0.411	6.90	6.79	6.91	6.92	6.93	6.93	6.93	6.93	6.92	6.91	6.89

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	5.0 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
155	0.412	6.91	6.80	6.93	6.93	6.94	6.94	6.94	6.94	6.93	6.92	6.90
156	0.413	6.92	6.82	6.94	6.94	6.95	6.95	6.95	6.95	6.94	6.93	6.91
157	0.415	6.94	6.83	6.95	6.96	6.96	6.96	6.96	6.96	6.95	6.94	6.92
158	0.416	6.95	6.85	6.96	6.97	6.97	6.97	6.97	6.97	6.96	6.95	6.93
159	0.417	6.96	6.86	6.97	6.98	6.98	6.98	6.98	6.98	6.97	6.96	6.94
160	0.418	6.97	6.87	6.98	6.99	6.99	6.99	6.99	6.99	6.98	6.97	6.95
161	0.420	6.98	6.89	6.99	7.00	7.00	7.00	7.00	7.00	6.99	6.98	6.96
162	0.421	6.99	6.90	7.00	7.01	7.01	7.01	7.01	7.01	7.00	6.99	6.97
163	0.422	7.00	6.91	7.01	7.02	7.02	7.02	7.02	7.01	7.01	7.00	6.98
164	0.423	7.01	6.92	7.02	7.03	7.03	7.03	7.03	7.02	7.02	7.01	6.99
165	0.425	7.02	6.94	7.03	7.03	7.04	7.04	7.03	7.03	7.03	7.02	7.00
166	0.426	7.03	6.95	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.02	7.01
167	0.427	7.04	6.96	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.03	7.02
168	0.428	7.05	6.97	7.06	7.06	7.06	7.06	7.06	7.06	7.06	7.04	7.02
169	0.430	7.06	6.98	7.07	7.07	7.07	7.07	7.07	7.07	7.06	7.05	7.03
170	0.431	7.07	6.99	7.07	7.08	7.08	7.08	7.08	7.07	7.07	7.06	7.04
171	0.432	7.07	7.00	7.08	7.09	7.09	7.09	7.08	7.08	7.08	7.06	7.05
172	0.433	7.08	7.01	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.07	7.06
173	0.435	7.09	7.02	7.10	7.10	7.10	7.10	7.10	7.10	7.09	7.08	7.06
174	0.436	7.10	7.03	7.11	7.11	7.11	7.11	7.11	7.11	7.10	7.09	7.07
175	0.437	7.11	7.04	7.12	7.12	7.12	7.12	7.11	7.11	7.11	7.10	7.08
176	0.438	7.12	7.05	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.10	7.09
177	0.440	7.12	7.06	7.13	7.13	7.13	7.13	7.13	7.13	7.12	7.11	7.09
178	0.441	7.13	7.07	7.14	7.14	7.14	7.14	7.14	7.13	7.13	7.12	7.10
179	0.442	7.14	7.07	7.14	7.15	7.15	7.15	7.14	7.14	7.14	7.12	7.11
180	0.443	7.15	7.08	7.15	7.15	7.15	7.15	7.15	7.15	7.14	7.13	7.11
181	0.445	7.15	7.09	7.16	7.16	7.16	7.16	7.16	7.15	7.15	7.14	7.12
182	0.446	7.16	7.10	7.17	7.17	7.17	7.17	7.16	7.16	7.16	7.14	7.13
183	0.447	7.17	7.11	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.15	7.14
184	0.448	7.17	7.12	7.18	7.18	7.18	7.18	7.18	7.17	7.17	7.16	7.14
185	0.450	7.18	7.12	7.19	7.19	7.19	7.19	7.18	7.18	7.18	7.16	7.15
186	0.451	7.19	7.13	7.19	7.19	7.19	7.19	7.19	7.19	7.18	7.17	7.16
187	0.452	7.19	7.14	7.20	7.20	7.20	7.20	7.20	7.19	7.19	7.18	7.16
188	0.453	7.20	7.15	7.21	7.21	7.21	7.20	7.20	7.20	7.20	7.18	7.17
189	0.455	7.21	7.15	7.21	7.21	7.21	7.21	7.21	7.21	7.20	7.19	7.17
190	0.456	7.21	7.16	7.22	7.22	7.22	7.22	7.21	7.21	7.21	7.20	7.18
191	0.457	7.22	7.17	7.22	7.22	7.22	7.22	7.22	7.22	7.22	7.20	7.19
192	0.458	7.23	7.17	7.23	7.23	7.23	7.23	7.23	7.22	7.22	7.21	7.19
193	0.460	7.23	7.18	7.24	7.24	7.24	7.23	7.23	7.23	7.23	7.21	7.20
194	0.461	7.24	7.19	7.24	7.24	7.24	7.24	7.24	7.24	7.23	7.22	7.20
195	0.462	7.24	7.19	7.25	7.25	7.25	7.25	7.24	7.24	7.24	7.23	7.21
196	0.463	7.25	7.20	7.25	7.25	7.25	7.25	7.25	7.25	7.24	7.23	7.22
197	0.465	7.25	7.21	7.26	7.26	7.26	7.26	7.25	7.25	7.25	7.24	7.22
198	0.466	7.26	7.21	7.26	7.26	7.26	7.26	7.26	7.26	7.25	7.24	7.23
199	0.467	7.27	7.22	7.27	7.27	7.27	7.27	7.27	7.26	7.26	7.25	7.23
200	0.468	7.27	7.22	7.27	7.28	7.27	7.27	7.27	7.27	7.27	7.25	7.24
201	0.470	7.28	7.23	7.28	7.28	7.28	7.28	7.28	7.27	7.27	7.26	7.24

Table 5

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	10 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
1	0.000	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.52	3.53	3.54
2	0.221	3.89	3.90	3.90	3.91	3.91	3.92	3.92	3.92	3.93	3.96	3.99
3	0.222	3.90	3.90	3.91	3.91	3.91	3.92	3.92	3.93	3.93	3.96	3.99
4	0.224	3.90	3.91	3.91	3.91	3.92	3.92	3.93	3.93	3.94	3.96	4.00
5	0.225	3.91	3.91	3.91	3.92	3.92	3.93	3.93	3.94	3.94	3.97	4.00
6	0.226	3.91	3.91	3.92	3.92	3.93	3.93	3.94	3.94	3.95	3.97	4.01
7	0.227	3.91	3.92	3.92	3.93	3.93	3.94	3.94	3.94	3.95	3.98	4.01
8	0.229	3.92	3.92	3.93	3.93	3.93	3.94	3.94	3.95	3.96	3.98	4.02
9	0.230	3.92	3.93	3.93	3.93	3.94	3.94	3.95	3.95	3.96	3.99	4.02
10	0.231	3.93	3.93	3.93	3.94	3.94	3.95	3.95	3.96	3.96	3.99	4.03
11	0.232	3.93	3.93	3.94	3.94	3.95	3.95	3.96	3.96	3.97	4.00	4.03
12	0.234	3.93	3.94	3.94	3.95	3.95	3.96	3.96	3.97	3.97	4.00	4.04
13	0.235	3.94	3.94	3.95	3.95	3.96	3.96	3.97	3.97	3.98	4.01	4.04
14	0.236	3.94	3.95	3.95	3.96	3.96	3.97	3.97	3.97	3.98	4.01	4.05
15	0.237	3.95	3.95	3.95	3.96	3.96	3.97	3.98	3.98	3.99	4.02	4.05
16	0.239	3.95	3.95	3.96	3.96	3.97	3.97	3.98	3.98	3.99	4.02	4.06
17	0.240	3.96	3.96	3.96	3.97	3.97	3.98	3.99	3.99	4.00	4.03	4.06
18	0.241	3.96	3.96	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.03	4.07
19	0.242	3.96	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.01	4.04	4.07
20	0.244	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.04	4.08
21	0.245	3.97	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.02	4.05	4.09
22	0.246	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.05	4.09
23	0.247	3.98	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.03	4.06	4.10
24	0.249	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.06	4.10
25	0.250	3.99	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.04	4.07	4.11
26	0.251	4.00	4.00	4.00	4.01	4.02	4.02	4.03	4.03	4.04	4.07	4.11
27	0.252	4.00	4.00	4.01	4.02	4.02	4.03	4.03	4.04	4.05	4.08	4.12
28	0.253	4.01	4.01	4.01	4.02	4.03	4.03	4.04	4.04	4.05	4.09	4.13
29	0.255	4.01	4.01	4.02	4.03	4.03	4.04	4.04	4.05	4.06	4.09	4.13
30	0.256	4.01	4.02	4.02	4.03	4.04	4.04	4.05	4.05	4.06	4.10	4.14
31	0.257	4.02	4.02	4.03	4.04	4.04	4.05	4.06	4.06	4.07	4.10	4.15
32	0.258	4.02	4.03	4.03	4.04	4.05	4.05	4.06	4.06	4.07	4.11	4.15
33	0.260	4.03	4.03	4.04	4.05	4.05	4.06	4.07	4.07	4.08	4.11	4.16
34	0.261	4.03	4.04	4.04	4.05	4.06	4.06	4.07	4.08	4.09	4.12	4.17
35	0.262	4.04	4.04	4.05	4.06	4.06	4.07	4.08	4.08	4.09	4.13	4.17
36	0.263	4.04	4.05	4.06	4.06	4.07	4.08	4.08	4.09	4.10	4.13	4.18
37	0.265	4.05	4.06	4.06	4.07	4.07	4.08	4.09	4.09	4.10	4.14	4.19
38	0.266	4.06	4.06	4.07	4.07	4.08	4.09	4.09	4.10	4.11	4.15	4.19
39	0.267	4.06	4.07	4.07	4.08	4.09	4.09	4.10	4.10	4.12	4.15	4.20
40	0.268	4.07	4.07	4.08	4.08	4.09	4.10	4.11	4.11	4.12	4.16	4.21
41	0.270	4.07	4.08	4.08	4.09	4.10	4.10	4.11	4.12	4.13	4.17	4.21
42	0.271	4.08	4.08	4.09	4.10	4.10	4.11	4.12	4.12	4.13	4.17	4.22
43	0.272	4.08	4.09	4.09	4.10	4.11	4.12	4.12	4.13	4.14	4.18	4.23
44	0.273	4.09	4.09	4.10	4.11	4.11	4.12	4.13	4.14	4.15	4.19	4.24
45	0.275	4.09	4.10	4.11	4.11	4.12	4.13	4.14	4.14	4.15	4.19	4.24
46	0.276	4.10	4.11	4.11	4.12	4.13	4.13	4.14	4.15	4.16	4.20	4.25
47	0.277	4.11	4.11	4.12	4.13	4.13	4.14	4.15	4.15	4.17	4.21	4.26
48	0.278	4.11	4.12	4.12	4.13	4.14	4.15	4.16	4.16	4.17	4.22	4.27
49	0.280	4.12	4.12	4.13	4.14	4.15	4.15	4.16	4.17	4.18	4.22	4.28
50	0.281	4.12	4.13	4.14	4.14	4.15	4.16	4.17	4.18	4.19	4.23	4.28

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	10 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
51	0.282	4.13	4.14	4.14	4.15	4.16	4.17	4.18	4.18	4.20	4.24	4.29
52	0.283	4.14	4.14	4.15	4.16	4.17	4.17	4.18	4.19	4.20	4.25	4.30
53	0.285	4.14	4.15	4.16	4.16	4.17	4.18	4.19	4.20	4.21	4.25	4.31
54	0.286	4.15	4.16	4.16	4.17	4.18	4.19	4.20	4.20	4.22	4.26	4.32
55	0.287	4.16	4.16	4.17	4.18	4.19	4.20	4.20	4.21	4.22	4.27	4.33
56	0.288	4.16	4.17	4.18	4.18	4.19	4.20	4.21	4.22	4.23	4.28	4.34
57	0.290	4.17	4.18	4.18	4.19	4.20	4.21	4.22	4.23	4.24	4.29	4.35
58	0.291	4.18	4.18	4.19	4.20	4.21	4.22	4.23	4.23	4.25	4.30	4.36
59	0.292	4.18	4.19	4.20	4.21	4.22	4.22	4.23	4.24	4.26	4.30	4.37
60	0.293	4.19	4.20	4.20	4.21	4.22	4.23	4.24	4.25	4.26	4.31	4.38
61	0.295	4.20	4.20	4.21	4.22	4.23	4.24	4.25	4.26	4.27	4.32	4.39
62	0.296	4.20	4.21	4.22	4.23	4.24	4.25	4.26	4.27	4.28	4.33	4.40
63	0.297	4.21	4.22	4.23	4.24	4.25	4.26	4.27	4.27	4.29	4.34	4.41
64	0.298	4.22	4.23	4.23	4.24	4.25	4.26	4.28	4.28	4.30	4.35	4.42
65	0.300	4.22	4.23	4.24	4.25	4.26	4.27	4.28	4.29	4.31	4.36	4.43
66	0.301	4.23	4.24	4.25	4.26	4.27	4.28	4.29	4.30	4.32	4.37	4.44
67	0.302	4.24	4.25	4.26	4.27	4.28	4.29	4.30	4.31	4.33	4.38	4.45
68	0.303	4.25	4.26	4.26	4.28	4.29	4.30	4.31	4.32	4.33	4.39	4.46
69	0.305	4.26	4.26	4.27	4.28	4.30	4.31	4.32	4.33	4.34	4.40	4.47
70	0.306	4.26	4.27	4.28	4.29	4.30	4.32	4.33	4.34	4.35	4.41	4.49
71	0.307	4.27	4.28	4.29	4.30	4.31	4.32	4.34	4.35	4.36	4.42	4.50
72	0.308	4.28	4.29	4.30	4.31	4.32	4.33	4.35	4.35	4.37	4.43	4.51
73	0.310	4.29	4.30	4.31	4.32	4.33	4.34	4.36	4.36	4.38	4.45	4.52
74	0.311	4.30	4.31	4.32	4.33	4.34	4.35	4.37	4.37	4.39	4.46	4.54
75	0.312	4.31	4.32	4.33	4.34	4.35	4.36	4.38	4.39	4.40	4.47	4.55
76	0.313	4.32	4.32	4.33	4.35	4.36	4.37	4.39	4.40	4.42	4.48	4.56
77	0.315	4.32	4.33	4.34	4.36	4.37	4.38	4.40	4.41	4.43	4.49	4.58
78	0.316	4.33	4.34	4.35	4.37	4.38	4.39	4.41	4.42	4.44	4.51	4.59
79	0.317	4.34	4.35	4.36	4.38	4.39	4.40	4.42	4.43	4.45	4.52	4.61
80	0.318	4.35	4.36	4.37	4.39	4.40	4.42	4.43	4.44	4.46	4.53	4.62
81	0.320	4.36	4.37	4.38	4.40	4.41	4.43	4.44	4.45	4.47	4.55	4.64
82	0.321	4.37	4.38	4.39	4.41	4.42	4.44	4.45	4.46	4.49	4.56	4.66
83	0.322	4.38	4.39	4.40	4.42	4.43	4.45	4.46	4.47	4.50	4.58	4.67
84	0.323	4.39	4.40	4.42	4.43	4.44	4.46	4.48	4.49	4.51	4.59	4.69
85	0.325	4.40	4.41	4.43	4.44	4.46	4.47	4.49	4.50	4.52	4.61	4.71
86	0.326	4.41	4.43	4.44	4.45	4.47	4.49	4.50	4.51	4.54	4.62	4.73
87	0.327	4.42	4.44	4.45	4.46	4.48	4.50	4.51	4.53	4.55	4.64	4.74
88	0.328	4.44	4.45	4.46	4.48	4.49	4.51	4.53	4.54	4.57	4.65	4.76
89	0.330	4.45	4.46	4.47	4.49	4.51	4.52	4.54	4.55	4.58	4.67	4.78
90	0.331	4.46	4.47	4.48	4.50	4.52	4.54	4.56	4.57	4.60	4.69	4.80
91	0.332	4.47	4.48	4.50	4.51	4.53	4.55	4.57	4.58	4.61	4.71	4.83
92	0.333	4.48	4.50	4.51	4.53	4.55	4.56	4.58	4.60	4.63	4.73	4.85
93	0.335	4.50	4.51	4.52	4.54	4.56	4.58	4.60	4.61	4.64	4.74	4.87
94	0.336	4.51	4.52	4.54	4.56	4.57	4.59	4.61	4.63	4.66	4.76	4.89
95	0.337	4.52	4.54	4.55	4.57	4.59	4.61	4.63	4.64	4.68	4.78	4.92
96	0.338	4.53	4.55	4.56	4.58	4.60	4.63	4.65	4.66	4.69	4.80	4.94
97	0.340	4.55	4.56	4.58	4.60	4.62	4.64	4.66	4.68	4.71	4.83	4.97
98	0.341	4.56	4.58	4.59	4.61	4.64	4.66	4.68	4.69	4.73	4.85	4.99
99	0.342	4.58	4.59	4.61	4.63	4.65	4.67	4.70	4.71	4.75	4.87	5.02
100	0.343	4.59	4.61	4.62	4.65	4.67	4.69	4.72	4.73	4.77	4.89	5.05
101	0.345	4.61	4.62	4.64	4.66	4.69	4.71	4.73	4.75	4.79	4.92	5.07
102	0.346	4.62	4.64	4.66	4.68	4.70	4.73	4.75	4.77	4.81	4.94	5.10

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	10 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
103	0.347	4.64	4.66	4.67	4.70	4.72	4.75	4.77	4.79	4.83	4.97	5.13
104	0.348	4.65	4.67	4.69	4.72	4.74	4.77	4.79	4.81	4.85	5.00	5.17
105	0.350	4.67	4.69	4.71	4.73	4.76	4.79	4.82	4.83	4.88	5.02	5.20
106	0.351	4.69	4.71	4.73	4.75	4.78	4.81	4.84	4.85	4.90	5.05	5.23
107	0.352	4.71	4.73	4.75	4.77	4.80	4.83	4.86	4.88	4.92	5.08	5.26
108	0.353	4.73	4.75	4.77	4.79	4.82	4.85	4.88	4.90	4.95	5.11	5.30
109	0.355	4.74	4.77	4.79	4.81	4.84	4.87	4.91	4.93	4.98	5.14	5.33
110	0.356	4.76	4.79	4.81	4.84	4.87	4.90	4.93	4.95	5.00	5.17	5.37
111	0.357	4.78	4.81	4.83	4.86	4.89	4.92	4.96	4.98	5.03	5.21	5.40
112	0.358	4.81	4.83	4.85	4.88	4.91	4.95	4.98	5.01	5.06	5.24	5.44
113	0.360	4.83	4.85	4.87	4.91	4.94	4.97	5.01	5.03	5.09	5.28	5.48
114	0.361	4.85	4.87	4.90	4.93	4.96	5.00	5.04	5.06	5.12	5.31	5.51
115	0.362	4.87	4.90	4.92	4.96	4.99	5.03	5.07	5.09	5.15	5.35	5.55
116	0.363	4.90	4.92	4.95	4.98	5.02	5.06	5.10	5.12	5.19	5.39	5.59
117	0.365	4.92	4.95	4.98	5.01	5.05	5.09	5.13	5.15	5.22	5.42	5.63
118	0.366	4.95	4.97	5.00	5.04	5.08	5.12	5.16	5.19	5.25	5.46	5.66
119	0.367	4.97	5.00	5.03	5.07	5.11	5.15	5.19	5.22	5.29	5.50	5.70
120	0.368	5.00	5.03	5.06	5.10	5.14	5.18	5.23	5.26	5.33	5.54	5.74
121	0.370	5.03	5.06	5.09	5.13	5.17	5.22	5.26	5.29	5.36	5.58	5.77
122	0.371	5.06	5.09	5.12	5.16	5.21	5.25	5.30	5.33	5.40	5.62	5.81
123	0.372	5.09	5.12	5.15	5.20	5.24	5.29	5.34	5.37	5.44	5.66	5.85
124	0.373	5.12	5.15	5.19	5.23	5.28	5.32	5.37	5.41	5.48	5.70	5.88
125	0.375	5.15	5.19	5.22	5.27	5.31	5.36	5.41	5.44	5.52	5.74	5.92
126	0.376	5.19	5.22	5.26	5.30	5.35	5.40	5.45	5.48	5.56	5.78	5.95
127	0.377	5.22	5.26	5.29	5.34	5.39	5.44	5.49	5.53	5.60	5.82	5.98
128	0.378	5.26	5.29	5.33	5.38	5.43	5.48	5.53	5.57	5.64	5.86	6.01
129	0.380	5.29	5.33	5.37	5.42	5.47	5.52	5.58	5.61	5.69	5.89	6.05
130	0.381	5.33	5.37	5.41	5.46	5.51	5.56	5.62	5.65	5.73	5.93	6.08
131	0.382	5.37	5.41	5.45	5.50	5.55	5.61	5.66	5.69	5.77	5.97	6.11
132	0.383	5.41	5.45	5.49	5.54	5.59	5.65	5.70	5.73	5.81	6.00	6.14
133	0.385	5.45	5.50	5.54	5.59	5.64	5.69	5.74	5.78	5.85	6.04	6.16
134	0.386	5.50	5.54	5.58	5.63	5.68	5.73	5.79	5.82	5.89	6.07	6.19
135	0.387	5.54	5.58	5.62	5.67	5.72	5.77	5.83	5.86	5.93	6.11	6.22
136	0.388	5.58	5.62	5.67	5.71	5.77	5.82	5.87	5.90	5.97	6.14	6.24
137	0.390	5.63	5.67	5.71	5.76	5.81	5.86	5.91	5.94	6.01	6.17	6.27
138	0.391	5.67	5.71	5.75	5.80	5.85	5.90	5.95	5.98	6.04	6.20	6.29
139	0.392	5.72	5.76	5.80	5.84	5.89	5.94	5.99	6.02	6.08	6.23	6.32
140	0.393	5.76	5.80	5.84	5.88	5.93	5.98	6.03	6.05	6.12	6.26	6.34
141	0.395	5.80	5.84	5.88	5.93	5.97	6.02	6.06	6.09	6.15	6.29	6.36
142	0.396	5.85	5.89	5.92	5.97	6.01	6.06	6.10	6.13	6.18	6.31	6.39
143	0.397	5.89	5.93	5.96	6.01	6.05	6.09	6.14	6.16	6.22	6.34	6.41
144	0.398	5.93	5.97	6.00	6.05	6.09	6.13	6.17	6.20	6.25	6.36	6.43
145	0.400	5.98	6.01	6.04	6.08	6.12	6.17	6.20	6.23	6.28	6.39	6.45
146	0.401	6.02	6.05	6.08	6.12	6.16	6.20	6.24	6.26	6.31	6.41	6.47
147	0.402	6.06	6.09	6.12	6.16	6.19	6.23	6.27	6.29	6.34	6.43	6.49
148	0.403	6.10	6.13	6.15	6.19	6.23	6.26	6.30	6.32	6.36	6.46	6.50
149	0.405	6.13	6.16	6.19	6.22	6.26	6.30	6.33	6.35	6.39	6.48	6.52
150	0.406	6.17	6.20	6.22	6.26	6.29	6.32	6.36	6.38	6.42	6.50	6.54
151	0.407	6.20	6.23	6.26	6.29	6.32	6.35	6.39	6.40	6.44	6.52	6.56
152	0.408	6.24	6.26	6.29	6.32	6.35	6.38	6.41	6.43	6.47	6.54	6.57
153	0.410	6.27	6.30	6.32	6.35	6.38	6.41	6.44	6.45	6.49	6.56	6.59
154	0.411	6.30	6.33	6.35	6.38	6.41	6.44	6.46	6.48	6.51	6.58	6.61

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	10 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
155	0.412	6.33	6.36	6.38	6.40	6.43	6.46	6.49	6.50	6.53	6.59	6.62
156	0.413	6.36	6.39	6.40	6.43	6.46	6.49	6.51	6.53	6.56	6.61	6.64
157	0.415	6.39	6.41	6.43	6.46	6.48	6.51	6.53	6.55	6.58	6.63	6.65
158	0.416	6.42	6.44	6.46	6.48	6.51	6.53	6.56	6.57	6.60	6.65	6.67
159	0.417	6.45	6.47	6.48	6.51	6.53	6.55	6.58	6.59	6.61	6.66	6.68
160	0.418	6.47	6.49	6.51	6.53	6.55	6.58	6.60	6.61	6.63	6.68	6.70
161	0.420	6.50	6.51	6.53	6.55	6.57	6.60	6.62	6.63	6.65	6.69	6.71
162	0.421	6.52	6.54	6.55	6.57	6.59	6.62	6.64	6.65	6.67	6.71	6.72
163	0.422	6.55	6.56	6.57	6.59	6.62	6.64	6.65	6.66	6.69	6.72	6.74
164	0.423	6.57	6.58	6.60	6.61	6.63	6.65	6.67	6.68	6.70	6.74	6.75
165	0.425	6.59	6.60	6.62	6.63	6.65	6.67	6.69	6.70	6.72	6.75	6.76
166	0.426	6.61	6.62	6.64	6.65	6.67	6.69	6.71	6.72	6.73	6.76	6.77
167	0.427	6.63	6.64	6.65	6.67	6.69	6.71	6.72	6.73	6.75	6.78	6.79
168	0.428	6.65	6.66	6.67	6.69	6.71	6.72	6.74	6.75	6.76	6.79	6.80
169	0.430	6.67	6.68	6.69	6.71	6.72	6.74	6.76	6.76	6.78	6.80	6.81
170	0.431	6.69	6.70	6.71	6.72	6.74	6.76	6.77	6.78	6.79	6.81	6.82
171	0.432	6.70	6.72	6.73	6.74	6.76	6.77	6.79	6.79	6.81	6.83	6.83
172	0.433	6.72	6.73	6.74	6.76	6.77	6.79	6.80	6.81	6.82	6.84	6.84
173	0.435	6.74	6.75	6.76	6.77	6.79	6.80	6.81	6.82	6.83	6.85	6.85
174	0.436	6.75	6.76	6.77	6.79	6.80	6.82	6.83	6.83	6.84	6.86	6.86
175	0.437	6.77	6.78	6.79	6.80	6.82	6.83	6.84	6.85	6.86	6.87	6.87
176	0.438	6.79	6.79	6.80	6.82	6.83	6.84	6.85	6.86	6.87	6.88	6.88
177	0.440	6.80	6.81	6.82	6.83	6.84	6.85	6.87	6.87	6.88	6.89	6.89
178	0.441	6.82	6.82	6.83	6.84	6.86	6.87	6.88	6.88	6.89	6.90	6.90
179	0.442	6.83	6.84	6.84	6.86	6.87	6.88	6.89	6.89	6.90	6.91	6.91
180	0.443	6.84	6.85	6.86	6.87	6.88	6.89	6.90	6.91	6.91	6.93	6.92
181	0.445	6.86	6.86	6.87	6.88	6.89	6.90	6.91	6.92	6.93	6.93	6.93
182	0.446	6.87	6.88	6.88	6.89	6.91	6.92	6.92	6.93	6.94	6.94	6.94
183	0.447	6.88	6.89	6.90	6.91	6.92	6.93	6.94	6.94	6.95	6.95	6.95
184	0.448	6.90	6.90	6.91	6.92	6.93	6.94	6.95	6.95	6.96	6.96	6.96
185	0.450	6.91	6.91	6.92	6.93	6.94	6.95	6.96	6.96	6.97	6.97	6.97
186	0.451	6.92	6.93	6.93	6.94	6.95	6.96	6.97	6.97	6.98	6.98	6.98
187	0.452	6.93	6.94	6.94	6.95	6.96	6.97	6.98	6.98	6.99	6.99	6.99
188	0.453	6.94	6.95	6.95	6.96	6.97	6.98	6.99	6.99	7.00	7.00	7.00
189	0.455	6.95	6.96	6.96	6.97	6.98	6.99	7.00	7.00	7.00	7.01	7.00
190	0.456	6.96	6.97	6.97	6.98	6.99	7.00	7.01	7.01	7.01	7.02	7.01
191	0.457	6.97	6.98	6.99	6.99	7.00	7.01	7.02	7.02	7.02	7.03	7.02
192	0.458	6.98	6.99	7.00	7.00	7.01	7.02	7.02	7.03	7.03	7.03	7.03
193	0.460	6.99	7.00	7.01	7.01	7.02	7.03	7.03	7.04	7.04	7.04	7.04
194	0.461	7.00	7.01	7.01	7.02	7.03	7.04	7.04	7.04	7.05	7.05	7.04
195	0.462	7.01	7.02	7.02	7.03	7.04	7.05	7.05	7.05	7.06	7.06	7.05
196	0.463	7.02	7.03	7.03	7.04	7.05	7.05	7.06	7.06	7.06	7.07	7.06
197	0.465	7.03	7.04	7.04	7.05	7.06	7.06	7.07	7.07	7.07	7.07	7.07
198	0.466	7.04	7.05	7.05	7.06	7.07	7.07	7.08	7.08	7.08	7.08	7.07
199	0.467	7.05	7.06	7.06	7.07	7.07	7.08	7.08	7.09	7.09	7.09	7.08
200	0.468	7.06	7.06	7.07	7.08	7.08	7.09	7.09	7.09	7.10	7.10	7.09
201	0.470	7.07	7.07	7.08	7.08	7.09	7.10	7.10	7.10	7.10	7.10	7.10

Table 6

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	20 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
1	0.000	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.52
2	0.221	3.84	3.84	3.84	3.85	3.85	3.85	3.86	3.86	3.86	3.88	3.89
3	0.222	3.84	3.85	3.85	3.85	3.85	3.86	3.86	3.86	3.87	3.88	3.90
4	0.224	3.85	3.85	3.85	3.86	3.86	3.86	3.87	3.87	3.87	3.89	3.90
5	0.225	3.85	3.85	3.86	3.86	3.86	3.87	3.87	3.87	3.88	3.89	3.91
6	0.226	3.86	3.86	3.86	3.86	3.87	3.87	3.87	3.88	3.88	3.90	3.91
7	0.227	3.86	3.86	3.87	3.87	3.87	3.88	3.88	3.88	3.89	3.90	3.92
8	0.229	3.86	3.87	3.87	3.87	3.88	3.88	3.88	3.89	3.89	3.91	3.92
9	0.230	3.87	3.87	3.87	3.88	3.88	3.88	3.89	3.89	3.90	3.91	3.93
10	0.231	3.87	3.88	3.88	3.88	3.89	3.89	3.89	3.90	3.90	3.92	3.93
11	0.232	3.88	3.88	3.88	3.89	3.89	3.89	3.90	3.90	3.90	3.92	3.94
12	0.234	3.88	3.89	3.89	3.89	3.89	3.90	3.90	3.91	3.91	3.93	3.94
13	0.235	3.89	3.89	3.89	3.90	3.90	3.90	3.91	3.91	3.91	3.93	3.95
14	0.236	3.89	3.89	3.90	3.90	3.90	3.91	3.91	3.92	3.92	3.94	3.95
15	0.237	3.90	3.90	3.90	3.91	3.91	3.91	3.92	3.92	3.92	3.94	3.96
16	0.239	3.90	3.90	3.91	3.91	3.91	3.92	3.92	3.93	3.93	3.95	3.97
17	0.240	3.91	3.91	3.91	3.92	3.92	3.92	3.93	3.93	3.94	3.95	3.97
18	0.241	3.91	3.91	3.92	3.92	3.92	3.93	3.93	3.94	3.94	3.96	3.98
19	0.242	3.92	3.92	3.92	3.93	3.93	3.93	3.94	3.94	3.95	3.96	3.98
20	0.244	3.92	3.92	3.93	3.93	3.93	3.94	3.94	3.95	3.95	3.97	3.99
21	0.245	3.93	3.93	3.93	3.94	3.94	3.94	3.95	3.95	3.96	3.97	3.99
22	0.246	3.93	3.93	3.94	3.94	3.94	3.95	3.95	3.96	3.96	3.98	4.00
23	0.247	3.94	3.94	3.94	3.95	3.95	3.95	3.96	3.96	3.97	3.99	4.01
24	0.249	3.94	3.94	3.95	3.95	3.96	3.96	3.96	3.97	3.97	3.99	4.01
25	0.250	3.95	3.95	3.95	3.96	3.96	3.96	3.97	3.97	3.98	4.00	4.02
26	0.251	3.95	3.95	3.96	3.96	3.97	3.97	3.97	3.98	3.98	4.00	4.02
27	0.252	3.96	3.96	3.96	3.97	3.97	3.98	3.98	3.99	3.99	4.01	4.03
28	0.253	3.96	3.96	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.02	4.04
29	0.255	3.97	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.00	4.02	4.04
30	0.256	3.97	3.98	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.03	4.05
31	0.257	3.98	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.01	4.03	4.06
32	0.258	3.98	3.99	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.04	4.06
33	0.260	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.05	4.07
34	0.261	3.99	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.03	4.05	4.08
35	0.262	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.03	4.04	4.06	4.08
36	0.263	4.01	4.01	4.01	4.02	4.02	4.03	4.03	4.04	4.04	4.07	4.09
37	0.265	4.01	4.02	4.02	4.02	4.03	4.03	4.04	4.05	4.05	4.07	4.10
38	0.266	4.02	4.02	4.03	4.03	4.04	4.04	4.05	4.05	4.06	4.08	4.11
39	0.267	4.02	4.03	4.03	4.04	4.04	4.05	4.05	4.06	4.06	4.09	4.11
40	0.268	4.03	4.03	4.04	4.04	4.05	4.05	4.06	4.06	4.07	4.09	4.12
41	0.270	4.03	4.04	4.04	4.05	4.05	4.06	4.07	4.07	4.08	4.10	4.13
42	0.271	4.04	4.05	4.05	4.06	4.06	4.07	4.07	4.08	4.08	4.11	4.14
43	0.272	4.05	4.05	4.06	4.06	4.07	4.07	4.08	4.09	4.09	4.12	4.14
44	0.273	4.05	4.06	4.06	4.07	4.07	4.08	4.09	4.09	4.10	4.12	4.15
45	0.275	4.06	4.06	4.07	4.08	4.08	4.09	4.09	4.10	4.11	4.13	4.16
46	0.276	4.07	4.07	4.08	4.08	4.09	4.09	4.10	4.11	4.11	4.14	4.17
47	0.277	4.07	4.08	4.08	4.09	4.09	4.10	4.11	4.11	4.12	4.15	4.18
48	0.278	4.08	4.08	4.09	4.10	4.10	4.11	4.11	4.12	4.13	4.15	4.18
49	0.280	4.09	4.09	4.10	4.10	4.11	4.12	4.12	4.13	4.13	4.16	4.19
50	0.281	4.09	4.10	4.10	4.11	4.12	4.12	4.13	4.14	4.14	4.17	4.20

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	20 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
51	0.282	4.10	4.11	4.11	4.12	4.12	4.13	4.14	4.14	4.15	4.18	4.21
52	0.283	4.11	4.11	4.12	4.12	4.13	4.14	4.14	4.15	4.16	4.19	4.22
53	0.285	4.11	4.12	4.12	4.13	4.14	4.14	4.15	4.16	4.17	4.20	4.23
54	0.286	4.12	4.13	4.13	4.14	4.15	4.15	4.16	4.17	4.17	4.20	4.24
55	0.287	4.13	4.13	4.14	4.15	4.15	4.16	4.17	4.17	4.18	4.21	4.25
56	0.288	4.14	4.14	4.15	4.15	4.16	4.17	4.18	4.18	4.19	4.22	4.26
57	0.290	4.14	4.15	4.16	4.16	4.17	4.18	4.18	4.19	4.20	4.23	4.27
58	0.291	4.15	4.16	4.16	4.17	4.18	4.18	4.19	4.20	4.21	4.24	4.28
59	0.292	4.16	4.17	4.17	4.18	4.19	4.19	4.20	4.21	4.22	4.25	4.29
60	0.293	4.17	4.17	4.18	4.19	4.19	4.20	4.21	4.22	4.23	4.26	4.30
61	0.295	4.17	4.18	4.19	4.19	4.20	4.21	4.22	4.23	4.23	4.27	4.31
62	0.296	4.18	4.19	4.20	4.20	4.21	4.22	4.23	4.23	4.24	4.28	4.32
63	0.297	4.19	4.20	4.20	4.21	4.22	4.23	4.24	4.24	4.25	4.29	4.33
64	0.298	4.20	4.21	4.21	4.22	4.23	4.24	4.24	4.25	4.26	4.30	4.34
65	0.300	4.21	4.21	4.22	4.23	4.24	4.25	4.25	4.26	4.27	4.31	4.35
66	0.301	4.22	4.22	4.23	4.24	4.25	4.25	4.26	4.27	4.28	4.32	4.36
67	0.302	4.23	4.23	4.24	4.25	4.26	4.26	4.27	4.28	4.29	4.33	4.37
68	0.303	4.23	4.24	4.25	4.26	4.26	4.27	4.28	4.29	4.30	4.34	4.38
69	0.305	4.24	4.25	4.26	4.27	4.27	4.28	4.29	4.30	4.31	4.35	4.40
70	0.306	4.25	4.26	4.27	4.28	4.28	4.29	4.30	4.31	4.32	4.36	4.41
71	0.307	4.26	4.27	4.28	4.28	4.29	4.30	4.31	4.32	4.33	4.37	4.42
72	0.308	4.27	4.28	4.29	4.29	4.30	4.31	4.32	4.33	4.34	4.39	4.43
73	0.310	4.28	4.29	4.30	4.30	4.31	4.32	4.33	4.34	4.35	4.40	4.45
74	0.311	4.29	4.30	4.31	4.32	4.32	4.33	4.34	4.36	4.37	4.41	4.46
75	0.312	4.30	4.31	4.32	4.33	4.34	4.35	4.36	4.37	4.38	4.42	4.47
76	0.313	4.31	4.32	4.33	4.34	4.35	4.36	4.37	4.38	4.39	4.44	4.49
77	0.315	4.32	4.33	4.34	4.35	4.36	4.37	4.38	4.39	4.40	4.45	4.50
78	0.316	4.33	4.34	4.35	4.36	4.37	4.38	4.39	4.40	4.41	4.46	4.51
79	0.317	4.34	4.35	4.36	4.37	4.38	4.39	4.40	4.41	4.43	4.47	4.53
80	0.318	4.35	4.36	4.37	4.38	4.39	4.40	4.41	4.43	4.44	4.49	4.54
81	0.320	4.36	4.37	4.38	4.39	4.40	4.41	4.43	4.44	4.45	4.50	4.56
82	0.321	4.38	4.38	4.39	4.40	4.42	4.43	4.44	4.45	4.46	4.52	4.57
83	0.322	4.39	4.40	4.40	4.42	4.43	4.44	4.45	4.46	4.48	4.53	4.59
84	0.323	4.40	4.41	4.42	4.43	4.44	4.45	4.46	4.48	4.49	4.55	4.61
85	0.325	4.41	4.42	4.43	4.44	4.45	4.47	4.48	4.49	4.50	4.56	4.62
86	0.326	4.42	4.43	4.44	4.45	4.47	4.48	4.49	4.51	4.52	4.58	4.64
87	0.327	4.43	4.44	4.45	4.47	4.48	4.49	4.51	4.52	4.53	4.59	4.66
88	0.328	4.45	4.46	4.47	4.48	4.49	4.51	4.52	4.53	4.55	4.61	4.68
89	0.330	4.46	4.47	4.48	4.49	4.51	4.52	4.53	4.55	4.56	4.63	4.69
90	0.331	4.47	4.48	4.50	4.51	4.52	4.54	4.55	4.56	4.58	4.64	4.71
91	0.332	4.49	4.50	4.51	4.52	4.54	4.55	4.56	4.58	4.60	4.66	4.73
92	0.333	4.50	4.51	4.52	4.54	4.55	4.57	4.58	4.60	4.61	4.68	4.75
93	0.335	4.52	4.53	4.54	4.55	4.57	4.58	4.60	4.61	4.63	4.70	4.77
94	0.336	4.53	4.54	4.55	4.57	4.58	4.60	4.61	4.63	4.64	4.71	4.79
95	0.337	4.54	4.56	4.57	4.58	4.60	4.61	4.63	4.65	4.66	4.73	4.81
96	0.338	4.56	4.57	4.58	4.60	4.61	4.63	4.65	4.66	4.68	4.75	4.84
97	0.340	4.58	4.59	4.60	4.62	4.63	4.65	4.66	4.68	4.70	4.77	4.86
98	0.341	4.59	4.60	4.62	4.63	4.65	4.67	4.68	4.70	4.72	4.79	4.88
99	0.342	4.61	4.62	4.63	4.65	4.67	4.68	4.70	4.72	4.74	4.81	4.90
100	0.343	4.62	4.64	4.65	4.67	4.68	4.70	4.72	4.74	4.76	4.84	4.93
101	0.345	4.64	4.65	4.67	4.69	4.70	4.72	4.74	4.76	4.78	4.86	4.95
102	0.346	4.66	4.67	4.69	4.70	4.72	4.74	4.76	4.78	4.80	4.88	4.98

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	20 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
103	0.347	4.68	4.69	4.70	4.72	4.74	4.76	4.78	4.80	4.82	4.90	5.00
104	0.348	4.69	4.71	4.72	4.74	4.76	4.78	4.80	4.82	4.84	4.93	5.03
105	0.350	4.71	4.73	4.74	4.76	4.78	4.80	4.82	4.84	4.86	4.95	5.05
106	0.351	4.73	4.75	4.76	4.78	4.80	4.82	4.84	4.86	4.88	4.98	5.08
107	0.352	4.75	4.77	4.78	4.80	4.82	4.84	4.86	4.89	4.91	5.00	5.11
108	0.353	4.77	4.79	4.80	4.82	4.85	4.87	4.89	4.91	4.93	5.03	5.14
109	0.355	4.79	4.81	4.83	4.85	4.87	4.89	4.91	4.93	4.96	5.06	5.17
110	0.356	4.81	4.83	4.85	4.87	4.89	4.91	4.94	4.96	4.98	5.08	5.20
111	0.357	4.84	4.85	4.87	4.89	4.91	4.94	4.96	4.98	5.01	5.11	5.23
112	0.358	4.86	4.88	4.89	4.92	4.94	4.96	4.99	5.01	5.03	5.14	5.26
113	0.360	4.88	4.90	4.92	4.94	4.96	4.99	5.01	5.04	5.06	5.17	5.29
114	0.361	4.90	4.92	4.94	4.97	4.99	5.01	5.04	5.06	5.09	5.20	5.32
115	0.362	4.93	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.23	5.35
116	0.363	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.15	5.26	5.39
117	0.365	4.98	5.00	5.02	5.04	5.07	5.10	5.12	5.15	5.18	5.29	5.42
118	0.366	5.01	5.03	5.05	5.07	5.10	5.12	5.15	5.18	5.21	5.32	5.45
119	0.367	5.03	5.05	5.07	5.10	5.13	5.15	5.18	5.21	5.24	5.36	5.49
120	0.368	5.06	5.08	5.10	5.13	5.16	5.18	5.21	5.24	5.27	5.39	5.52
121	0.370	5.09	5.11	5.13	5.16	5.19	5.21	5.24	5.27	5.30	5.42	5.56
122	0.371	5.12	5.14	5.16	5.19	5.22	5.25	5.27	5.30	5.33	5.46	5.59
123	0.372	5.15	5.17	5.19	5.22	5.25	5.28	5.31	5.34	5.37	5.49	5.63
124	0.373	5.18	5.20	5.22	5.25	5.28	5.31	5.34	5.37	5.40	5.53	*5.66*
125	0.375	5.21	5.23	5.26	5.29	5.31	5.34	5.37	5.40	5.43	5.56	*5.70*
126	0.376	5.24	5.27	5.29	5.32	5.35	5.38	5.41	5.44	5.47	5.60	*5.73*
127	0.377	5.27	5.30	5.32	5.35	5.38	5.41	5.44	5.47	5.50	5.63	*5.77*
128	0.378	5.31	5.33	5.36	5.39	5.42	5.45	5.48	5.51	5.54	5.67	*5.80*
129	0.380	5.34	5.37	5.39	5.42	5.45	5.48	5.51	5.54	5.57	5.70	*5.84*
130	0.381	5.37	5.40	5.43	5.46	5.49	5.52	5.55	5.58	5.61	5.74	*5.87*
131	0.382	5.41	5.44	5.46	5.49	5.52	5.55	5.58	5.62	5.65	5.78	*5.91*
132	0.383	5.44	5.47	5.50	5.53	5.56	5.59	5.62	5.65	5.68	5.81	*5.94*
133	0.385	5.48	5.51	5.53	5.57	5.60	5.63	5.66	5.69	5.72	5.85	*5.98*
134	0.386	5.52	5.55	5.57	5.60	5.63	5.66	5.69	5.73	5.76	5.88	*6.01*
135	0.387	5.56	5.58	5.61	5.64	5.67	5.70	5.73	5.76	5.79	5.92	*6.04*
136	0.388	5.59	5.62	5.65	5.68	5.71	5.74	5.77	5.80	5.83	5.95	*6.08*
137	0.390	5.63	5.66	5.68	5.72	5.74	5.77	5.80	5.83	5.86	5.99	6.11
138	0.391	5.67	5.70	5.72	5.75	5.78	5.81	5.84	5.87	5.90	6.02	6.14
139	0.392	5.71	5.73	5.76	5.79	5.82	5.85	5.88	5.91	5.94	6.06	6.17
140	0.393	5.75	5.77	5.80	5.83	5.86	5.88	5.91	5.94	5.97	6.09	6.20
141	0.395	5.78	5.81	5.84	5.86	5.89	5.92	5.95	5.98	6.01	6.12	6.23
142	0.396	5.82	5.85	5.87	5.90	5.93	5.96	5.99	6.01	6.04	6.16	6.26
143	0.397	5.86	5.89	5.91	5.94	5.97	5.99	6.02	6.05	6.08	6.19	6.29
144	0.398	5.90	5.92	5.95	5.98	6.00	6.03	6.06	6.08	6.11	6.22	6.32
145	0.400	5.94	5.96	5.98	6.01	6.04	6.06	6.09	6.12	6.14	6.25	6.35
146	0.401	5.97	6.00	6.02	6.05	6.07	6.10	6.12	6.15	6.18	6.28	6.38
147	0.402	6.01	6.04	6.06	6.08	6.11	6.13	6.16	6.18	6.21	6.31	6.41
148	0.403	6.05	6.07	6.09	6.12	6.14	6.17	6.19	6.22	6.24	6.34	6.43
149	0.405	6.08	6.11	6.13	6.15	6.17	6.20	6.22	6.25	6.27	6.37	6.46
150	0.406	6.12	6.14	6.16	6.18	6.21	6.23	6.25	6.28	6.30	6.40	6.49
151	0.407	6.16	6.18	6.20	6.22	6.24	6.26	6.29	6.31	6.33	6.43	6.51
152	0.408	6.19	6.21	6.23	6.25	6.27	6.29	6.32	6.34	6.36	6.45	6.53
153	0.410	6.22	6.24	6.26	6.28	6.30	6.32	6.35	6.37	6.39	6.48	6.56
154	0.411	6.26	6.28	6.29	6.31	6.33	6.35	6.38	6.40	6.42	6.51	6.58

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	20 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
155	0.412	6.29	6.31	6.32	6.34	6.36	6.38	6.40	6.43	6.45	6.53	6.60
156	0.413	6.32	6.34	6.36	6.37	6.39	6.41	6.43	6.45	6.47	6.56	6.62
157	0.415	6.35	6.37	6.38	6.40	6.42	6.44	6.46	6.48	6.50	6.58	6.65
158	0.416	6.38	6.40	6.41	6.43	6.45	6.47	6.49	6.51	6.53	6.60	6.67
159	0.417	6.41	6.43	6.44	6.46	6.48	6.49	6.51	6.53	6.55	6.63	6.69
160	0.418	6.44	6.46	6.47	6.49	6.50	6.52	6.54	6.56	6.58	6.65	6.71
161	0.420	6.47	6.48	6.50	6.51	6.53	6.55	6.56	6.58	6.60	6.67	6.72
162	0.421	6.50	6.51	6.52	6.54	6.55	6.57	6.59	6.61	6.62	6.69	6.74
163	0.422	6.52	6.54	6.55	6.56	6.58	6.59	6.61	6.63	6.65	6.71	6.76
164	0.423	6.55	6.56	6.57	6.59	6.60	6.62	6.63	6.65	6.67	6.73	6.78
165	0.425	6.57	6.59	6.60	6.61	6.62	6.64	6.66	6.67	6.69	6.75	6.80
166	0.426	6.60	6.61	6.62	6.63	6.65	6.66	6.68	6.69	6.71	6.77	6.81
167	0.427	6.62	6.64	6.65	6.66	6.67	6.68	6.70	6.71	6.73	6.79	6.83
168	0.428	6.65	6.66	6.67	6.68	6.69	6.70	6.72	6.73	6.75	6.80	6.84
169	0.430	6.67	6.68	6.69	6.70	6.71	6.73	6.74	6.75	6.77	6.82	6.86
170	0.431	6.69	6.70	6.71	6.72	6.73	6.75	6.76	6.77	6.79	6.84	6.87
171	0.432	6.71	6.72	6.73	6.74	6.75	6.76	6.78	6.79	6.81	6.85	6.89
172	0.433	6.73	6.74	6.75	6.76	6.77	6.78	6.80	6.81	6.82	6.87	6.90
173	0.435	6.75	6.76	6.77	6.78	6.79	6.80	6.81	6.83	6.84	6.89	6.92
174	0.436	6.77	6.78	6.79	6.80	6.81	6.82	6.83	6.84	6.86	6.90	6.93
175	0.437	6.79	6.80	6.81	6.82	6.83	6.84	6.85	6.86	6.87	6.92	6.94
176	0.438	6.81	6.82	6.83	6.83	6.84	6.85	6.87	6.88	6.89	6.93	6.96
177	0.440	6.83	6.84	6.84	6.85	6.86	6.87	6.88	6.89	6.90	6.94	6.97
178	0.441	6.85	6.85	6.86	6.87	6.88	6.89	6.90	6.91	6.92	6.96	6.98
179	0.442	6.86	6.87	6.88	6.88	6.89	6.90	6.91	6.92	6.93	6.97	6.99
180	0.443	6.88	6.89	6.89	6.90	6.91	6.92	6.93	6.94	6.95	6.98	7.01
181	0.445	6.90	6.90	6.91	6.92	6.92	6.93	6.94	6.95	6.96	7.00	7.02
182	0.446	6.91	6.92	6.92	6.93	6.94	6.95	6.96	6.97	6.98	7.01	7.03
183	0.447	6.93	6.93	6.94	6.95	6.95	6.96	6.97	6.98	6.99	7.02	7.04
184	0.448	6.94	6.95	6.95	6.96	6.97	6.98	6.98	6.99	7.00	7.03	7.05
185	0.450	6.96	6.96	6.97	6.97	6.98	6.99	7.00	7.01	7.02	7.04	7.06
186	0.451	6.97	6.98	6.98	6.99	6.99	7.00	7.01	7.02	7.03	7.06	7.07
187	0.452	6.98	6.99	6.99	7.00	7.01	7.01	7.02	7.03	7.04	7.07	7.08
188	0.453	7.00	7.00	7.01	7.01	7.02	7.03	7.04	7.04	7.05	7.08	7.09
189	0.455	7.01	7.02	7.02	7.03	7.03	7.04	7.05	7.06	7.06	7.09	7.10
190	0.456	7.02	7.03	7.03	7.04	7.04	7.05	7.06	7.07	7.07	7.10	7.11
191	0.457	7.04	7.04	7.05	7.05	7.06	7.06	7.07	7.08	7.09	7.11	7.12
192	0.458	7.05	7.05	7.06	7.06	7.07	7.07	7.08	7.09	7.10	7.12	7.13
193	0.460	7.06	7.07	7.07	7.07	7.08	7.09	7.09	7.10	7.11	7.13	7.14
194	0.461	7.07	7.08	7.08	7.09	7.09	7.10	7.10	7.11	7.12	7.14	7.15
195	0.462	7.08	7.09	7.09	7.10	7.10	7.11	7.11	7.12	7.13	7.15	7.16
196	0.463	7.09	7.10	7.10	7.11	7.11	7.12	7.13	7.13	7.14	7.16	7.17
197	0.465	7.11	7.11	7.11	7.12	7.12	7.13	7.14	7.14	7.15	7.17	7.18
198	0.466	7.12	7.12	7.12	7.13	7.13	7.14	7.15	7.15	7.16	7.18	7.18
199	0.467	7.13	7.13	7.13	7.14	7.14	7.15	7.15	7.16	7.17	7.18	7.19
200	0.468	7.14	7.14	7.14	7.15	7.15	7.16	7.16	7.17	7.18	7.19	7.20
201	0.470	7.15	7.15	7.15	7.16	7.16	7.17	7.17	7.18	7.19	7.20	7.21

Table 1

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
1	0.000	3.50	3.50		0.000	3.50		0.000	3.50
2	0.001	3.50	3.50		0.001	3.50		0.002	3.50
3	0.002	3.50	3.50		0.002	3.50		0.003	3.51
4	0.003	3.50	3.50		0.003	3.50		0.005	3.51
5	0.004	3.51	3.50		0.005	3.50		0.006	3.51
6	0.005	3.51	3.51		0.006	3.51		0.008	3.51
7	0.006	3.51	3.51		0.007	3.51		0.009	3.51
8	0.007	3.51	3.51		0.008	3.51		0.011	3.52
9	0.008	3.51	3.51		0.009	3.51		0.013	3.52
10	0.009	3.51	3.51		0.010	3.51		0.014	3.52
11	0.010	3.51	3.51		0.012	3.51		0.016	3.52
12	0.011	3.52	3.51		0.013	3.51		0.017	3.53
13	0.012	3.52	3.52		0.014	3.52		0.019	3.53
14	0.013	3.52	3.52		0.015	3.52		0.020	3.53
15	0.013	3.52	3.52		0.016	3.52		0.022	3.53
16	0.014	3.52	3.52		0.017	3.52		0.024	3.53
17	0.015	3.52	3.52		0.019	3.52		0.025	3.54
18	0.016	3.52	3.52		0.020	3.52		0.027	3.54
19	0.017	3.52	3.52		0.021	3.53		0.028	3.54
20	0.018	3.53	3.52		0.022	3.53		0.030	3.54
21	0.019	3.53	3.53		0.023	3.53		0.031	3.54
22	0.020	3.53	3.53		0.024	3.53		0.033	3.55
23	0.021	3.53	3.53		0.026	3.53		0.035	3.55
24	0.022	3.53	3.53		0.027	3.53		0.036	3.55
25	0.023	3.53	3.53		0.028	3.54		0.038	3.55
26	0.024	3.53	3.53		0.029	3.54		0.039	3.56
27	0.025	3.54	3.53		0.030	3.54		0.041	3.56
28	0.026	3.54	3.54		0.031	3.54		0.042	3.56
29	0.027	3.54	3.54		0.033	3.54		0.044	3.56
30	0.028	3.54	3.54		0.034	3.54		0.046	3.56
31	0.029	3.54	3.54		0.035	3.55		0.047	3.57
32	0.030	3.54	3.54		0.036	3.55		0.049	3.57
33	0.031	3.54	3.54		0.037	3.55		0.050	3.57
34	0.032	3.55	3.54		0.038	3.55		0.052	3.57
35	0.033	3.55	3.55		0.040	3.55		0.054	3.58
36	0.034	3.55	3.55		0.041	3.55		0.055	3.58
37	0.035	3.55	3.55		0.042	3.56		0.057	3.58
38	0.036	3.55	3.55		0.043	3.56		0.058	3.58
39	0.037	3.55	3.55		0.044	3.56		0.060	3.59
40	0.038	3.55	3.55		0.045	3.56		0.061	3.59
41	0.039	3.56	3.55		0.047	3.56		0.063	3.59
42	0.040	3.56	3.56		0.048	3.56		0.065	3.59
43	0.040	3.56	3.56		0.049	3.57		0.066	3.60
44	0.041	3.56	3.56		0.050	3.57		0.068	3.60
45	0.042	3.56	3.56		0.051	3.57		0.069	3.60
46	0.043	3.56	3.56		0.052	3.57		0.071	3.60
47	0.044	3.56	3.56		0.054	3.57		0.072	3.61
48	0.045	3.57	3.56		0.055	3.58		0.074	3.61
49	0.046	3.57	3.57		0.056	3.58		0.076	3.61
50	0.047	3.57	3.57		0.057	3.58		0.077	3.61

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
51	0.048	3.57	3.57		0.058	3.58		0.079	3.62
52	0.049	3.57	3.57		0.059	3.58		0.080	3.62
53	0.050	3.57	3.57		0.061	3.58		0.082	3.62
54	0.051	3.58	3.57		0.062	3.59		0.083	3.62
55	0.052	3.58	3.57		0.063	3.59		0.085	3.63
56	0.053	3.58	3.58		0.064	3.59		0.087	3.63
57	0.054	3.58	3.58		0.065	3.59		0.088	3.63
58	0.055	3.58	3.58		0.066	3.59		0.090	3.63
59	0.056	3.58	3.58		0.068	3.60		0.091	3.64
60	0.057	3.58	3.58		0.069	3.60		0.093	3.64
61	0.058	3.59	3.58		0.070	3.60		0.094	3.64
62	0.059	3.59	3.59		0.071	3.60		0.096	3.64
63	0.060	3.59	3.59		0.072	3.60		0.098	3.65
64	0.061	3.59	3.59		0.073	3.61		0.099	3.65
65	0.062	3.59	3.59		0.075	3.61		0.101	3.65
66	0.063	3.59	3.59		0.076	3.61		0.102	3.66
67	0.064	3.60	3.59		0.077	3.61		0.104	3.66
68	0.065	3.60	3.59		0.078	3.61		0.105	3.66
69	0.066	3.60	3.60		0.079	3.62		0.107	3.66
70	0.067	3.60	3.60		0.080	3.62		0.109	3.67
71	0.067	3.60	3.60		0.082	3.62		0.110	3.67
72	0.068	3.60	3.60		0.083	3.62		0.112	3.67
73	0.069	3.61	3.60		0.084	3.62		0.113	3.68
74	0.070	3.61	3.60		0.085	3.63		0.115	3.68
75	0.071	3.61	3.61		0.086	3.63		0.116	3.68
76	0.072	3.61	3.61		0.087	3.63		0.118	3.68
77	0.073	3.61	3.61		0.089	3.63		0.120	3.69
78	0.074	3.61	3.61		0.090	3.63		0.121	3.69
79	0.075	3.62	3.61		0.091	3.64		0.123	3.69
80	0.076	3.62	3.61		0.092	3.64		0.124	3.70
81	0.077	3.62	3.62		0.093	3.64		0.126	3.70
82	0.078	3.62	3.62		0.094	3.64		0.127	3.70
83	0.079	3.62	3.62		0.096	3.64		0.129	3.71
84	0.080	3.62	3.62		0.097	3.65		0.131	3.71
85	0.081	3.63	3.62		0.098	3.65		0.132	3.71
86	0.082	3.63	3.62		0.099	3.65		0.134	3.72
87	0.083	3.63	3.63		0.100	3.65		0.135	3.72
88	0.084	3.63	3.63		0.101	3.65		0.137	3.72
89	0.085	3.63	3.63		0.103	3.66		0.139	3.73
90	0.086	3.63	3.63		0.104	3.66		0.140	3.73
91	0.087	3.64	3.63		0.105	3.66		0.142	3.73
92	0.088	3.64	3.63		0.106	3.66		0.143	3.74
93	0.089	3.64	3.64		0.107	3.67		0.145	3.74
94	0.090	3.64	3.64		0.108	3.67		0.146	3.74
95	0.091	3.64	3.64		0.110	3.67		0.148	3.75
96	0.092	3.64	3.64		0.111	3.67		0.150	3.75
97	0.093	3.65	3.64		0.112	3.67		0.151	3.75
98	0.094	3.65	3.64		0.113	3.68		0.153	3.76
99	0.094	3.65	3.65		0.114	3.68		0.154	3.76
100	0.095	3.65	3.65		0.115	3.68		0.156	3.76
101	0.096	3.65	3.65		0.117	3.68		0.157	3.77
102	0.097	3.66	3.65		0.118	3.69		0.159	3.77

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
103	0.098	3.66	3.65		0.119	3.69		0.161	3.77
104	0.099	3.66	3.66		0.120	3.69		0.162	3.78
105	0.100	3.66	3.66		0.121	3.69		0.164	3.78
106	0.101	3.66	3.66		0.122	3.69		0.165	3.78
107	0.102	3.66	3.66		0.124	3.70		0.167	3.79
108	0.103	3.67	3.66		0.125	3.70		0.168	3.79
109	0.104	3.67	3.66		0.126	3.70		0.170	3.79
110	0.105	3.67	3.67		0.127	3.70		0.172	3.80
111	0.106	3.67	3.67		0.128	3.71		0.173	3.80
112	0.107	3.67	3.67		0.129	3.71		0.175	3.81
113	0.108	3.68	3.67		0.131	3.71		0.176	3.81
114	0.109	3.68	3.67		0.132	3.71		0.178	3.81
115	0.110	3.68	3.68		0.133	3.72		0.179	3.82
116	0.111	3.68	3.68		0.134	3.72		0.181	3.82
117	0.112	3.68	3.68		0.135	3.72		0.183	3.83
118	0.113	3.69	3.68		0.136	3.72		0.184	3.83
119	0.114	3.69	3.68		0.138	3.73		0.186	3.83
120	0.115	3.69	3.69		0.139	3.73		0.187	3.84
121	0.116	3.69	3.69		0.140	3.73		0.189	3.84
122	0.117	3.69	3.69		0.141	3.73		0.190	3.85
123	0.118	3.70	3.69		0.142	3.74		0.192	3.85
124	0.119	3.70	3.69		0.143	3.74		0.194	3.85
125	0.120	3.70	3.70		0.145	3.74		0.195	3.86
126	0.121	3.70	3.70		0.146	3.74		0.197	3.86
127	0.121	3.70	3.70		0.147	3.75		0.198	3.87
128	0.122	3.71	3.70		0.148	3.75		0.200	3.87
129	0.123	3.71	3.70		0.149	3.75		0.201	3.88
130	0.124	3.71	3.71		0.150	3.75		0.203	3.88
131	0.125	3.71	3.71		0.152	3.76		0.205	3.89
132	0.126	3.71	3.71		0.153	3.76		0.206	3.89
133	0.127	3.72	3.71		0.154	3.76		0.208	3.89
134	0.128	3.72	3.71		0.155	3.77		0.209	3.90
135	0.129	3.72	3.72		0.156	3.77		0.211	3.90
136	0.130	3.72	3.72		0.157	3.77		0.212	3.91
137	0.131	3.73	3.72		0.159	3.77		0.214	3.91
138	0.132	3.73	3.72		0.160	3.78		0.216	3.92
139	0.133	3.73	3.72		0.161	3.78		0.217	3.92
140	0.134	3.73	3.73		0.162	3.78		0.219	3.93
141	0.135	3.73	3.73		0.163	3.79		0.220	3.93
142	0.136	3.74	3.73		0.164	3.79		0.222	3.94
143	0.137	3.74	3.73		0.166	3.79		0.224	3.94
144	0.138	3.74	3.73		0.167	3.79		0.225	3.95
145	0.139	3.74	3.74		0.168	3.80		0.227	3.95
146	0.140	3.74	3.74		0.169	3.80		0.228	3.96
147	0.141	3.75	3.74		0.170	3.80		0.230	3.96
148	0.142	3.75	3.74		0.171	3.81		0.231	3.97
149	0.143	3.75	3.75		0.173	3.81		0.233	3.97
150	0.144	3.75	3.75		0.174	3.81		0.235	3.98
151	0.145	3.76	3.75		0.175	3.81		0.236	3.98
152	0.146	3.76	3.75		0.176	3.82		0.238	3.99
153	0.147	3.76	3.75		0.177	3.82		0.239	4.00
154	0.147	3.76	3.76		0.178	3.82		0.241	4.00

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
155	0.148	3.77	3.76		0.180	3.83		0.242	4.01
156	0.149	3.77	3.76		0.181	3.83		0.244	4.01
157	0.150	3.77	3.76		0.182	3.83		0.246	4.02
158	0.151	3.77	3.77		0.183	3.84		0.247	4.02
159	0.152	3.78	3.77		0.184	3.84		0.249	4.03
160	0.153	3.78	3.77		0.185	3.84		0.250	4.04
161	0.154	3.78	3.77		0.187	3.85		0.252	4.04
162	0.155	3.78	3.78		0.188	3.85		0.253	4.05
163	0.156	3.78	3.78		0.189	3.85		0.255	4.05
164	0.157	3.79	3.78		0.190	3.86		0.257	4.06
165	0.158	3.79	3.78		0.191	3.86		0.258	4.07
166	0.159	3.79	3.79		0.192	3.86		0.260	4.07
167	0.160	3.79	3.79		0.194	3.87		0.261	4.08
168	0.161	3.80	3.79		0.195	3.87		0.263	4.09
169	0.162	3.80	3.79		0.196	3.87		0.264	4.09
170	0.163	3.80	3.80		0.197	3.88		0.266	4.10
171	0.164	3.81	3.80		0.198	3.88		0.268	4.11
172	0.165	3.81	3.80		0.199	3.88		0.269	4.11
173	0.166	3.81	3.80		0.201	3.89		0.271	4.12
174	0.167	3.81	3.81		0.202	3.89		0.272	4.13
175	0.168	3.82	3.81		0.203	3.89		0.274	4.13
176	0.169	3.82	3.81		0.204	3.90		0.275	4.14
177	0.170	3.82	3.81		0.205	3.90		0.277	4.15
178	0.171	3.82	3.82		0.206	3.91		0.279	4.16
179	0.172	3.83	3.82		0.208	3.91		0.280	4.16
180	0.173	3.83	3.82		0.209	3.91		0.282	4.17
181	0.174	3.83	3.82		0.210	3.92		0.283	4.18
182	0.174	3.83	3.83		0.211	3.92		0.285	4.19
183	0.175	3.84	3.83		0.212	3.92		0.286	4.20
184	0.176	3.84	3.83		0.213	3.93		0.288	4.20
185	0.177	3.84	3.83		0.215	3.93		0.290	4.21
186	0.178	3.85	3.84		0.216	3.94		0.291	4.22
187	0.179	3.85	3.84		0.217	3.94		0.293	4.23
188	0.180	3.85	3.84		0.218	3.94		0.294	4.24
189	0.181	3.85	3.85		0.219	3.95		0.296	4.25
190	0.182	3.86	3.85		0.220	3.95		0.297	4.25
191	0.183	3.86	3.85		0.222	3.96		0.299	4.26
192	0.184	3.86	3.85		0.223	3.96		0.301	4.27
193	0.185	3.87	3.86		0.224	3.96		0.302	4.28
194	0.186	3.87	3.86		0.225	3.97		0.304	4.29
195	0.187	3.87	3.86		0.226	3.97		0.305	4.30
196	0.188	3.87	3.87		0.227	3.98		0.307	4.31
197	0.189	3.88	3.87		0.229	3.98		0.309	4.32
198	0.190	3.88	3.87		0.230	3.99		0.310	4.33
199	0.191	3.88	3.87		0.231	3.99		0.312	4.34
200	0.192	3.89	3.88		0.232	4.00		0.313	4.35
201	0.193	3.89	3.88		0.233	4.00		0.315	4.36
202	0.194	3.89	3.88		0.234	4.00		0.316	4.37
203	0.195	3.90	3.89		0.236	4.01		0.318	4.38
204	0.196	3.90	3.89		0.237	4.01		0.320	4.39
205	0.197	3.90	3.89		0.238	4.02		0.321	4.40
206	0.198	3.91	3.90		0.239	4.02		0.323	4.42

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
207	0.199	3.91	3.90		0.240	4.03		0.324	4.43
208	0.200	3.91	3.90		0.241	4.03		0.326	4.44
209	0.201	3.92	3.90		0.243	4.04		0.327	4.45
210	0.201	3.92	3.91		0.244	4.04		0.329	4.46
211	0.202	3.92	3.91		0.245	4.05		0.331	4.48
212	0.203	3.93	3.91		0.246	4.05		0.332	4.49
213	0.204	3.93	3.92		0.247	4.06		0.334	4.50
214	0.205	3.93	3.92		0.248	4.06		0.335	4.51
215	0.206	3.94	3.92		0.250	4.07		0.337	4.53
216	0.207	3.94	3.93		0.251	4.07		0.338	4.54
217	0.208	3.94	3.93		0.252	4.08		0.340	4.55
218	0.209	3.95	3.93		0.253	4.08		0.342	4.57
219	0.210	3.95	3.94		0.254	4.09		0.343	4.58
220	0.211	3.95	3.94		0.255	4.09		0.345	4.60
221	0.212	3.96	3.94		0.257	4.10		0.346	4.61
222	0.213	3.96	3.95		0.258	4.11		0.348	4.63
223	0.214	3.96	3.95		0.259	4.11		0.349	4.65
224	0.215	3.97	3.96		0.260	4.12		0.351	4.66
225	0.216	3.97	3.96		0.261	4.12		0.353	4.68
226	0.217	3.98	3.96		0.262	4.13		0.354	4.70
227	0.218	3.98	3.97		0.264	4.13		0.356	4.71
228	0.219	3.98	3.97		0.265	4.14		0.357	4.73
229	0.220	3.99	3.97		0.266	4.15		0.359	4.75
230	0.221	3.99	3.98		0.267	4.15		0.360	4.77
231	0.222	4.00	3.98		0.268	4.16		0.362	4.79
232	0.223	4.00	3.98		0.269	4.17		0.364	4.81
233	0.224	4.00	3.99		0.271	4.17		0.365	4.83
234	0.225	4.01	3.99		0.272	4.18		0.367	4.85
235	0.226	4.01	4.00		0.273	4.18		0.368	4.87
236	0.227	4.02	4.00		0.274	4.19		0.370	4.89
237	0.228	4.02	4.00		0.275	4.20		0.371	4.92
238	0.228	4.02	4.01		0.276	4.21		0.373	4.94
239	0.229	4.03	4.01		0.278	4.21		0.375	4.97
240	0.230	4.03	4.02		0.279	4.22		0.376	4.99
241	0.231	4.04	4.02		0.280	4.23		0.378	5.02
242	0.232	4.04	4.02		0.281	4.23		0.379	5.04
243	0.233	4.05	4.03		0.282	4.24		0.381	5.07
244	0.234	4.05	4.03		0.283	4.25		0.382	5.10
245	0.235	4.05	4.04		0.285	4.26		0.384	5.13
246	0.236	4.06	4.04		0.286	4.26		0.386	5.16
247	0.237	4.06	4.04		0.287	4.27		0.387	5.20
248	0.238	4.07	4.05		0.288	4.28		0.389	5.23
249	0.239	4.07	4.05		0.289	4.29		0.390	5.27
250	0.240	4.08	4.06		0.290	4.29		0.392	5.30
251	0.241	4.08	4.06		0.292	4.30		0.394	5.34
252	0.242	4.09	4.07		0.293	4.31		0.395	5.38
253	0.243	4.09	4.07		0.294	4.32		0.397	5.41
254	0.244	4.10	4.08		0.295	4.33		0.398	5.45
255	0.245	4.10	4.08		0.296	4.34		0.400	5.49
256	0.246	4.11	4.09		0.297	4.35		0.401	5.53
257	0.247	4.11	4.09		0.298	4.36		0.403	5.57
258	0.248	4.12	4.10		0.300	4.36		0.405	5.61

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
259	0.249	4.12	4.10		0.301	4.37		0.406	5.65
260	0.250	4.13	4.10		0.302	4.38		0.408	5.69
261	0.251	4.13	4.11		0.303	4.39		0.409	5.73
262	0.252	4.14	4.11		0.304	4.40		0.411	5.76
263	0.253	4.14	4.12		0.305	4.41		0.412	5.80
264	0.254	4.15	4.12		0.307	4.42		0.414	5.84
265	0.254	4.16	4.13		0.308	4.43		0.416	5.87
266	0.255	4.16	4.14		0.309	4.44		0.417	5.90
267	0.256	4.17	4.14		0.310	4.46		0.419	5.94
268	0.257	4.17	4.15		0.311	4.47		0.420	5.97
269	0.258	4.18	4.15		0.312	4.48		0.422	6.00
270	0.259	4.19	4.16		0.314	4.49		0.423	6.03
271	0.260	4.19	4.16		0.315	4.50		0.425	6.06
272	0.261	4.20	4.17		0.316	4.51		0.427	6.09
273	0.262	4.20	4.17		0.317	4.53		0.428	6.12
274	0.263	4.21	4.18		0.318	4.54		0.430	6.14
275	0.264	4.22	4.18		0.319	4.55		0.431	6.17
276	0.265	4.22	4.19		0.321	4.56		0.433	6.19
277	0.266	4.23	4.20		0.322	4.58		0.434	6.22
278	0.267	4.24	4.20		0.323	4.59		0.436	6.25
279	0.268	4.24	4.21		0.324	4.61		0.438	6.27
280	0.269	4.25	4.22		0.325	4.62		0.439	6.29
281	0.270	4.26	4.22		0.326	4.64		0.441	6.32
282	0.271	4.26	4.23		0.328	4.65		0.442	6.34
283	0.272	4.27	4.23		0.329	4.67		0.444	6.36
284	0.273	4.28	4.24		0.330	4.68		0.445	6.38
285	0.274	4.29	4.25		0.331	4.70		0.447	6.40
286	0.275	4.29	4.25		0.332	4.72		0.449	6.43
287	0.276	4.30	4.26		0.333	4.73		0.450	6.45
288	0.277	4.31	4.27		0.335	4.75		0.452	6.47
289	0.278	4.32	4.27		0.336	4.77		0.453	6.49
290	0.279	4.33	4.28		0.337	4.79		0.455	6.51
291	0.280	4.33	4.29		0.338	4.81		0.456	6.53
292	0.281	4.34	4.30		0.339	4.83		0.458	6.54
293	0.281	4.35	4.30		0.340	4.85		0.460	6.56
294	0.282	4.36	4.31		0.342	4.87		0.461	6.58
295	0.283	4.37	4.32		0.343	4.90		0.463	6.60
296	0.284	4.38	4.33		0.344	4.92		0.464	6.62
297	0.285	4.39	4.33		0.345	4.95		0.466	6.63
298	0.286	4.40	4.34		0.346	4.97		0.467	6.65
299	0.287	4.41	4.35		0.347	5.00		0.469	6.67
300	0.288	4.42	4.36		0.349	5.03		0.471	6.68
301	0.289	4.43	4.37		0.350	5.06		0.472	6.70
302	0.290	4.44	4.38		0.351	5.09		0.474	6.72
303	0.291	4.45	4.39		0.352	5.12		0.475	6.73
304	0.292	4.46	4.39		0.353	5.15		0.477	6.75
305	0.293	4.47	4.40		0.354	5.19		0.478	6.76
306	0.294	4.48	4.41		0.356	5.22		0.480	6.78
307	0.295	4.49	4.42		0.357	5.26		0.482	6.79
308	0.296	4.50	4.43		0.358	5.30		0.483	6.80
309	0.297	4.52	4.44		0.359	5.34		0.485	6.82
310	0.298	4.53	4.45		0.360	5.39		0.486	6.83

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
311	0.299	4.54	4.46		0.361	5.43		0.488	6.84
312	0.300	4.56	4.47		0.363	5.48		0.490	6.86
313	0.301	4.57	4.48		0.364	5.52		0.491	6.87
314	0.302	4.58	4.49		0.365	5.57		0.493	6.88
315	0.303	4.60	4.50		0.366	5.61		0.494	6.90
316	0.304	4.61	4.52		0.367	5.66		0.496	6.91
317	0.305	4.63	4.53		0.368	5.70		0.497	6.92
318	0.306	4.64	4.54		0.370	5.75		0.499	6.93
319	0.307	4.66	4.55		0.371	5.79		0.501	6.94
320	0.308	4.68	4.56		0.372	5.83		0.502	6.95
321	0.308	4.70	4.58		0.373	5.87		0.504	6.97
322	0.309	4.71	4.59		0.374	5.91		0.505	6.98
323	0.310	4.73	4.60		0.375	5.95		0.507	6.99
324	0.311	4.75	4.62		0.377	5.99		0.508	7.00
325	0.312	4.77	4.63		0.378	6.02		0.510	7.01
326	0.313	4.80	4.65		0.379	6.06		0.512	7.02
327	0.314	4.82	4.66		0.380	6.09		0.513	7.03
328	0.315	4.84	4.68		0.381	6.12		0.515	7.04
329	0.316	4.87	4.69		0.382	6.15		0.516	7.05
330	0.317	4.89	4.71		0.384	6.18		0.518	7.06
331	0.318	4.92	4.73		0.385	6.21		0.519	7.07
332	0.319	4.95	4.75		0.386	6.24		0.521	7.08
333	0.320	4.98	4.76		0.387	6.26		0.523	7.08
334	0.321	5.01	4.78		0.388	6.29		0.524	7.09
335	0.322	5.05	4.80		0.389	6.31		0.526	7.10
336	0.323	5.09	4.82		0.391	6.34		0.527	7.11
337	0.324	5.13	4.84		0.392	6.36		0.529	7.12
338	0.325	5.17	4.87		0.393	6.38		0.530	7.13
339	0.326	5.22	4.89		0.394	6.41		0.532	7.14
340	0.327	5.27	4.91		0.395	6.43		0.534	7.14
341	0.328	5.32	4.94		0.396	6.45		0.535	7.15
342	0.329	5.38	4.97		0.398	6.47		0.537	7.16
343	0.330	5.44	4.99		0.399	6.49		0.538	7.17
344	0.331	5.50	5.02		0.400	6.51		0.540	7.17
345	0.332	5.56	5.05		0.401	6.53		0.541	7.18
346	0.333	5.63	5.09		0.402	6.55		0.543	7.19
347	0.334	5.70	5.12		0.403	6.56		0.545	7.20
348	0.335	5.76	5.16		0.405	6.58		0.546	7.20
349	0.335	5.82	5.19		0.406	6.60		0.548	7.21
350	0.336	5.88	5.23		0.407	6.61		0.549	7.22
351	0.337	5.94	5.28		0.408	6.63		0.551	7.23
352	0.338	5.99	5.32		0.409	6.65		0.552	7.23
353	0.339	6.04	5.37		0.410	6.66		0.554	7.24
354	0.340	6.09	5.42		0.412	6.68		0.556	7.25
355	0.341	6.13	5.47		0.413	6.69		0.557	7.25
356	0.342	6.17	5.52		0.414	6.71		0.559	7.26
357	0.343	6.21	5.57		0.415	6.72		0.560	7.26
358	0.344	6.24	5.63		0.416	6.73		0.562	7.27
359	0.345	6.27	5.68		0.417	6.75		0.563	7.28
360	0.346	6.31	5.73		0.419	6.76		0.565	7.28
361	0.347	6.34	5.78		0.420	6.77		0.567	7.29
362	0.348	6.36	5.83		0.421	6.79		0.568	7.30

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
363	0.349	6.39	5.88		0.422	6.80		0.570	7.30
364	0.350	6.42	5.92		0.423	6.81		0.571	7.31
365	0.351	6.44	5.97		0.424	6.82		0.573	7.31
366	0.352	6.46	6.01		0.426	6.83		0.575	7.32
367	0.353	6.49	6.05		0.427	6.85		0.576	7.32
368	0.354	6.51	6.08		0.428	6.86		0.578	7.33
369	0.355	6.53	6.12		0.429	6.87		0.579	7.34
370	0.356	6.55	6.15		0.430	6.88		0.581	7.34
371	0.357	6.57	6.19		0.431	6.89		0.582	7.35
372	0.358	6.59	6.22		0.433	6.90		0.584	7.35
373	0.359	6.60	6.25		0.434	6.91		0.586	7.36
374	0.360	6.62	6.27		0.435	6.92		0.587	7.36
375	0.361	6.64	6.30		0.436	6.93		0.589	7.37
376	0.362	6.65	6.33		0.437	6.94		0.590	7.37
377	0.362	6.67	6.35		0.438	6.95		0.592	7.38
378	0.363	6.68	6.38		0.440	6.96		0.593	7.38
379	0.364	6.70	6.40		0.441	6.97		0.595	7.39
380	0.365	6.71	6.42		0.442	6.97		0.597	7.39
381	0.366	6.73	6.44		0.443	6.98		0.598	7.40
382	0.367	6.74	6.46		0.444	6.99		0.600	7.40
383	0.368	6.75	6.48		0.445	7.00		0.601	7.41
384	0.369	6.77	6.50		0.447	7.01		0.603	7.41
385	0.370	6.78	6.52		0.448	7.02		0.604	7.42
386	0.371	6.79	6.54		0.449	7.03		0.606	7.42
387	0.372	6.80	6.56		0.450	7.03		0.608	7.42
388	0.373	6.81	6.57		0.451	7.04		0.609	7.43
389	0.374	6.82	6.59		0.452	7.05		0.611	7.43
390	0.375	6.83	6.61		0.454	7.06		0.612	7.44
391	0.376	6.85	6.62		0.455	7.06		0.614	7.44
392	0.377	6.86	6.64		0.456	7.07		0.615	7.45
393	0.378	6.87	6.65		0.457	7.08		0.617	7.45
394	0.379	6.88	6.67		0.458	7.09		0.619	7.45
395	0.380	6.89	6.68		0.459	7.09		0.620	7.46
396	0.381	6.89	6.70		0.461	7.10		0.622	7.46
397	0.382	6.90	6.71		0.462	7.11		0.623	7.47
398	0.383	6.91	6.72		0.463	7.11		0.625	7.47
399	0.384	6.92	6.73		0.464	7.12		0.626	7.48
400	0.385	6.93	6.75		0.465	7.13		0.628	7.48
401	0.386	6.94	6.76		0.466	7.13		0.630	7.48
402	0.387	6.95	6.77		0.468	7.14		0.631	7.49
403	0.388	6.96	6.78		0.469	7.15		0.633	7.49
404	0.388	6.96	6.79		0.470	7.15		0.634	7.50
405	0.389	6.97	6.80		0.471	7.16		0.636	7.50
406	0.390	6.98	6.82		0.472	7.16		0.637	7.50
407	0.391	6.99	6.83		0.473	7.17		0.639	7.51
408	0.392	7.00	6.84		0.475	7.18		0.641	7.51
409	0.393	7.00	6.85		0.476	7.18		0.642	7.51
410	0.394	7.01	6.86		0.477	7.19		0.644	7.52
411	0.395	7.02	6.87		0.478	7.19		0.645	7.52
412	0.396	7.03	6.88		0.479	7.20		0.647	7.52
413	0.397	7.03	6.88		0.480	7.20		0.648	7.53
414	0.398	7.04	6.89		0.482	7.21		0.650	7.53

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
415	0.399	7.05	6.90		0.483	7.22		0.652	7.54
416	0.400	7.05	6.91		0.484	7.22		0.653	7.54
417	0.401	7.06	6.92		0.485	7.23		0.655	7.54
418	0.402	7.07	6.93		0.486	7.23		0.656	7.55
419	0.403	7.07	6.94		0.487	7.24		0.658	7.55
420	0.404	7.08	6.95		0.489	7.24		0.660	7.55
421	0.405	7.09	6.95		0.490	7.25		0.661	7.56
422	0.406	7.09	6.96		0.491	7.25		0.663	7.56
423	0.407	7.10	6.97		0.492	7.26		0.664	7.56
424	0.408	7.10	6.98		0.493	7.26		0.666	7.57
425	0.409	7.11	6.99		0.494	7.27		0.667	7.57
426	0.410	7.12	6.99		0.496	7.27		0.669	7.57
427	0.411	7.12	7.00		0.497	7.28		0.671	7.58
428	0.412	7.13	7.01		0.498	7.28		0.672	7.58
429	0.413	7.13	7.01		0.499	7.29		0.674	7.58
430	0.414	7.14	7.02		0.500	7.29		0.675	7.59
431	0.415	7.14	7.03		0.501	7.29		0.677	7.59
432	0.415	7.15	7.04		0.503	7.30		0.678	7.59
433	0.416	7.15	7.04		0.504	7.30		0.680	7.59
434	0.417	7.16	7.05		0.505	7.31		0.682	7.60
435	0.418	7.16	7.06		0.506	7.31		0.683	7.60
436	0.419	7.17	7.06		0.507	7.32		0.685	7.60
437	0.420	7.17	7.07		0.508	7.32		0.686	7.61
438	0.421	7.18	7.07		0.510	7.33		0.688	7.61
439	0.422	7.18	7.08		0.511	7.33		0.689	7.61
440	0.423	7.19	7.09		0.512	7.33		0.691	7.62
441	0.424	7.19	7.09		0.513	7.34		0.693	7.62
442	0.425	7.20	7.10		0.514	7.34		0.694	7.62
443	0.426	7.20	7.10		0.515	7.35		0.696	7.62
444	0.427	7.21	7.11		0.517	7.35		0.697	7.63
445	0.428	7.21	7.12		0.518	7.35		0.699	7.63
446	0.429	7.22	7.12		0.519	7.36		0.700	7.63
447	0.430	7.22	7.13		0.520	7.36		0.702	7.64
448	0.431	7.23	7.13		0.521	7.37		0.704	7.64
449	0.432	7.23	7.14		0.522	7.37		0.705	7.64
450	0.433	7.24	7.14		0.524	7.37		0.707	7.64
451	0.434	7.24	7.15		0.525	7.38		0.708	7.65
452	0.435	7.24	7.15		0.526	7.38		0.710	7.65
453	0.436	7.25	7.16		0.527	7.38		0.711	7.65
454	0.437	7.25	7.16		0.528	7.39		0.713	7.66
455	0.438	7.26	7.17		0.529	7.39		0.715	7.66
456	0.439	7.26	7.17		0.531	7.40		0.716	7.66
457	0.440	7.27	7.18		0.532	7.40		0.718	7.66
458	0.441	7.27	7.18		0.533	7.40		0.719	7.67
459	0.442	7.27	7.19		0.534	7.41		0.721	7.67
460	0.442	7.28	7.19		0.535	7.41		0.722	7.67
461	0.443	7.28	7.20		0.536	7.41		0.724	7.67
462	0.444	7.29	7.20		0.538	7.42		0.726	7.68
463	0.445	7.29	7.21		0.539	7.42		0.727	7.68
464	0.446	7.29	7.21		0.540	7.42		0.729	7.68
465	0.447	7.30	7.22		0.541	7.43		0.730	7.68
466	0.448	7.30	7.22		0.542	7.43		0.732	7.69

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	2.50	5.00			10.00			20.00
ROW	Base [mMol/l]				Base [mMol/l]			Base [mMol/l]	
467	0.449	7.31	7.23		0.543	7.43		0.733	7.69
468	0.450	7.31	7.23		0.545	7.44		0.735	7.69
469	0.451	7.31	7.24		0.546	7.44		0.737	7.69
470	0.452	7.32	7.24		0.547	7.44		0.738	7.70
471	0.453	7.32	7.24		0.548	7.45		0.740	7.70
472	0.454	7.32	7.25		0.549	7.45		0.741	7.70
473	0.455	7.33	7.25		0.550	7.45		0.743	7.70
474	0.456	7.33	7.26		0.552	7.46		0.745	7.71
475	0.457	7.33	7.26		0.553	7.46		0.746	7.71
476	0.458	7.34	7.26		0.554	7.46		0.748	7.71
477	0.459	7.34	7.27		0.555	7.47		0.749	7.71
478	0.460	7.34	7.27		0.556	7.47		0.751	7.72
479	0.461	7.35	7.28		0.557	7.47		0.752	7.72
480	0.462	7.35	7.28		0.559	7.48		0.754	7.72
481	0.463	7.36	7.28		0.560	7.48		0.756	7.72
482	0.464	7.36	7.29		0.561	7.48		0.757	7.72
483	0.465	7.36	7.29		0.562	7.48		0.759	7.73
484	0.466	7.37	7.30		0.563	7.49		0.760	7.73
485	0.467	7.37	7.30		0.564	7.49		0.762	7.73
486	0.468	7.37	7.30		0.566	7.49		0.763	7.73
487	0.469	7.37	7.31		0.567	7.50		0.765	7.74
488	0.469	7.38	7.31		0.568	7.50		0.767	7.74
489	0.470	7.38	7.32		0.569	7.50		0.768	7.74
490	0.471	7.38	7.32		0.570	7.50		0.770	7.74
491	0.472	7.39	7.32		0.571	7.51		0.771	7.74
492	0.473	7.39	7.33		0.573	7.51		0.773	7.75
493	0.474	7.39	7.33		0.574	7.51		0.774	7.75
494	0.475	7.40	7.33		0.575	7.52		0.776	7.75
495	0.476	7.40	7.34		0.576	7.52		0.778	7.75
496	0.477	7.40	7.34		0.577	7.52		0.779	7.76
497	0.478	7.41	7.34		0.578	7.52		0.781	7.76
498	0.479	7.41	7.35		0.580	7.53		0.782	7.76
499	0.480	7.41	7.35		0.581	7.53		0.784	7.76
500	0.481	7.41	7.35		0.582	7.53		0.785	7.76
501	0.482	7.42	7.36		0.583	7.54		0.787	7.77
502	0.483	7.42	7.36		0.584	7.54		0.789	7.03

Table 2

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	Al [µmol/l]							
ROW	pH	20.00	17.50	15.00	12.50	10.00	7.50	5.00	2.50
1	3.5	12.94	12.72	12.55	11.98	11.98	12.08	11.13	2.50
2	3.55	12.93	12.70	12.50	11.93	11.94	12.01	11.05	10.72
3	3.6	12.92	12.67	12.45	11.88	11.90	11.95	10.97	10.51
4	3.65	12.91	12.65	12.39	11.82	11.86	11.87	10.88	10.29
5	3.7	12.90	12.62	12.34	11.77	11.81	11.80	10.79	10.07
6	3.75	12.89	12.59	12.28	11.71	11.76	11.72	10.69	9.84
7	3.8	12.88	12.57	12.23	11.65	11.71	11.63	10.58	9.60
8	3.85	12.87	12.53	12.17	11.59	11.66	11.55	10.46	9.36
9	3.9	12.86	12.50	12.11	11.53	11.60	11.45	10.34	9.11
10	3.95	12.84	12.47	12.05	11.46	11.54	11.36	10.21	8.86
11	4	12.82	12.43	11.98	11.40	11.47	11.26	10.08	8.60
12	4.05	12.81	12.39	11.92	11.33	11.41	11.16	9.93	8.34
13	4.1	12.79	12.35	11.85	11.26	11.34	11.05	9.78	8.08
14	4.15	12.77	12.30	11.78	11.19	11.26	10.94	9.63	7.81
15	4.2	12.74	12.26	11.71	11.12	11.19	10.83	9.46	7.54
16	4.25	12.72	12.21	11.64	11.04	11.11	10.71	9.29	7.27
17	4.3	12.69	12.16	11.56	10.97	11.02	10.59	9.12	7.00
18	4.35	12.66	12.11	11.49	10.89	10.93	10.47	8.93	6.73
19	4.4	12.63	12.05	11.41	10.81	10.84	10.34	8.75	6.46
20	4.45	12.60	11.99	11.33	10.73	10.75	10.21	8.55	6.19
21	4.5	12.57	11.93	11.25	10.65	10.65	10.07	8.35	5.92
22	4.55	12.53	11.86	11.17	10.56	10.55	9.93	8.15	5.66
23	4.6	12.49	11.80	11.08	10.47	10.44	9.79	7.94	5.40
24	4.65	12.44	11.72	10.99	10.38	10.33	9.64	7.72	5.14
25	4.7	12.40	11.65	10.90	10.29	10.22	9.49	7.51	4.89
26	4.75	12.35	11.57	10.81	10.20	10.10	9.34	7.29	4.64
27	4.8	12.29	11.49	10.72	10.10	9.98	9.18	7.06	4.40
28	4.85	12.23	11.41	10.62	10.01	9.85	9.02	6.84	4.16
29	4.9	12.17	11.32	10.53	9.91	9.72	8.85	6.61	3.93
30	4.95	12.11	11.23	10.43	9.80	9.59	8.69	6.38	3.71
31	5	12.04	11.13	10.32	9.70	9.45	8.52	6.15	3.49
32	5.05	11.97	11.03	10.22	9.59	9.31	8.35	5.92	3.28
33	5.1	11.89	10.93	10.11	9.49	9.16	8.17	5.69	3.08
34	5.15	11.81	10.82	10.01	9.38	9.02	8.00	5.46	2.89
35	5.2	11.72	10.71	9.90	9.26	8.86	7.82	5.24	2.70
36	5.25	11.63	10.60	9.78	9.15	8.71	7.64	5.01	2.53
37	5.3	11.54	10.48	9.67	9.03	8.55	7.45	4.79	2.36
38	5.35	11.44	10.36	9.55	8.91	8.39	7.27	4.58	2.20
39	5.4	11.33	10.23	9.43	8.79	8.22	7.08	4.36	2.05
40	5.45	11.22	10.10	9.31	8.67	8.06	6.90	4.15	1.90
41	5.5	11.10	9.97	9.18	8.54	7.89	6.71	3.95	1.76
42	5.55	10.98	9.83	9.06	8.41	7.71	6.52	3.75	1.64
43	5.6	10.85	9.69	8.93	8.28	7.54	6.33	3.55	1.52
44	5.65	10.72	9.54	8.80	8.15	7.36	6.14	3.37	1.40
45	5.7	10.58	9.39	8.66	8.01	7.18	5.95	3.18	1.30
46	5.75	10.44	9.24	8.52	7.87	7.00	5.76	3.01	1.20
47	5.8	10.29	9.08	8.39	7.73	6.81	5.57	2.84	1.11
48	5.85	10.13	8.92	8.24	7.59	6.63	5.38	2.67	1.02
49	5.9	9.97	8.76	8.10	7.44	6.44	5.19	2.52	0.95
50	5.95	9.80	8.59	7.95	7.30	6.25	5.00	2.37	0.87

COLUMN	1	2	3	4	5	6	7	8	9
	TOC [ppm]	Al [µmol/l]							
ROW	pH	20.00	17.50	15.00	12.50	10.00	7.50	5.00	2.50
51	6	9.63	8.41	7.81	7.14	6.06	4.82	2.22	0.81
52	6.05	9.45	8.24	7.65	6.99	5.87	4.63	2.09	0.74
53	6.1	9.26	8.06	7.50	6.84	5.68	4.45	1.96	0.69
54	6.15	9.07	7.87	7.34	6.68	5.49	4.26	1.84	0.64
55	6.2	8.87	7.69	7.19	6.52	5.30	4.08	1.72	0.59
56	6.25	8.67	7.50	7.02	6.36	5.11	3.90	1.61	0.55
57	6.3	8.46	7.30	6.86	6.19	4.92	3.73	1.51	0.51
58	6.35	8.25	7.11	6.69	6.02	4.73	3.55	1.42	0.47
59	6.4	8.03	6.91	6.53	5.85	4.54	3.38	1.33	0.44
60	6.45	7.81	6.71	6.35	5.68	4.35	3.21	1.25	0.41
61	6.5	7.58	6.50	6.18	5.51	4.16	3.05	1.17	0.39
62	6.55	7.34	6.29	6.00	5.33	3.97	2.88	1.10	0.37
63	6.6	7.11	6.08	5.83	5.15	3.79	2.72	1.03	0.35
64	6.65	6.86	5.87	5.64	4.97	3.60	2.56	0.97	0.33
65	6.7	6.62	5.66	5.46	4.78	3.42	2.41	0.91	0.31
66	6.75	6.37	5.44	5.27	4.60	3.24	2.26	0.86	0.30
67	6.8	6.11	5.23	5.09	4.41	3.06	2.11	0.81	0.28
68	6.85	5.86	5.01	4.90	4.22	2.89	1.97	0.77	0.27
69	6.9	5.60	4.79	4.70	4.02	2.71	1.83	0.73	0.26
70	6.95	5.34	4.57	4.51	3.83	2.54	1.69	0.69	0.25
71	7	5.07	4.34	4.31	3.63	2.38	1.56	0.66	0.25
72	7.05	4.80	4.12	4.11	3.43	2.21	1.43	0.63	0.24
73	7.1	4.53	3.90	3.90	3.22	2.05	1.31	0.61	0.23
74	7.15	4.26	3.67	3.70	3.02	1.89	1.19	0.58	0.23
75	7.2	3.99	3.45	3.49	2.81	1.74	1.07	0.56	0.23

Table 5

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	10 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
1	0.000	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.52	3.53	3.54
2	0.221	3.89	3.90	3.90	3.91	3.91	3.92	3.92	3.92	3.93	3.96	3.99
3	0.222	3.90	3.90	3.91	3.91	3.91	3.92	3.92	3.93	3.93	3.96	3.99
4	0.224	3.90	3.91	3.91	3.91	3.92	3.92	3.93	3.93	3.94	3.96	4.00
5	0.225	3.91	3.91	3.91	3.92	3.92	3.93	3.93	3.94	3.94	3.97	4.00
6	0.226	3.91	3.91	3.92	3.92	3.93	3.93	3.94	3.94	3.95	3.97	4.01
7	0.227	3.91	3.92	3.92	3.93	3.93	3.94	3.94	3.94	3.95	3.98	4.01
8	0.229	3.92	3.92	3.93	3.93	3.93	3.94	3.94	3.95	3.96	3.98	4.02
9	0.230	3.92	3.93	3.93	3.93	3.94	3.94	3.95	3.95	3.96	3.99	4.02
10	0.231	3.93	3.93	3.93	3.94	3.94	3.95	3.95	3.96	3.96	3.99	4.03
11	0.232	3.93	3.93	3.94	3.94	3.95	3.95	3.96	3.96	3.97	4.00	4.03
12	0.234	3.93	3.94	3.94	3.95	3.95	3.96	3.96	3.97	3.97	4.00	4.04
13	0.235	3.94	3.94	3.95	3.95	3.96	3.96	3.97	3.97	3.98	4.01	4.04
14	0.236	3.94	3.95	3.95	3.96	3.96	3.97	3.97	3.97	3.98	4.01	4.05
15	0.237	3.95	3.95	3.95	3.96	3.96	3.97	3.98	3.98	3.99	4.02	4.05
16	0.239	3.95	3.95	3.96	3.96	3.97	3.97	3.98	3.98	3.99	4.02	4.06
17	0.240	3.96	3.96	3.96	3.97	3.97	3.98	3.99	3.99	4.00	4.03	4.06
18	0.241	3.96	3.96	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.03	4.07
19	0.242	3.96	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.01	4.04	4.07
20	0.244	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.04	4.08
21	0.245	3.97	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.02	4.05	4.09
22	0.246	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.05	4.09
23	0.247	3.98	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.03	4.06	4.10
24	0.249	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.06	4.10
25	0.250	3.99	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.04	4.07	4.11
26	0.251	4.00	4.00	4.00	4.01	4.02	4.02	4.03	4.03	4.04	4.07	4.11
27	0.252	4.00	4.00	4.01	4.02	4.02	4.03	4.03	4.04	4.05	4.08	4.12
28	0.253	4.01	4.01	4.01	4.02	4.03	4.03	4.04	4.04	4.05	4.09	4.13
29	0.255	4.01	4.01	4.02	4.03	4.03	4.04	4.04	4.05	4.06	4.09	4.13
30	0.256	4.01	4.02	4.02	4.03	4.04	4.04	4.05	4.05	4.06	4.10	4.14
31	0.257	4.02	4.02	4.03	4.04	4.04	4.05	4.06	4.06	4.07	4.10	4.15
32	0.258	4.02	4.03	4.03	4.04	4.05	4.05	4.06	4.06	4.07	4.11	4.15
33	0.260	4.03	4.03	4.04	4.05	4.05	4.06	4.07	4.07	4.08	4.11	4.16
34	0.261	4.03	4.04	4.04	4.05	4.06	4.06	4.07	4.08	4.09	4.12	4.17
35	0.262	4.04	4.04	4.05	4.06	4.06	4.07	4.08	4.08	4.09	4.13	4.17
36	0.263	4.04	4.05	4.06	4.06	4.07	4.08	4.08	4.09	4.10	4.13	4.18
37	0.265	4.05	4.06	4.06	4.07	4.07	4.08	4.09	4.09	4.10	4.14	4.19
38	0.266	4.06	4.06	4.07	4.07	4.08	4.09	4.09	4.10	4.11	4.15	4.19
39	0.267	4.06	4.07	4.07	4.08	4.09	4.09	4.10	4.10	4.12	4.15	4.20
40	0.268	4.07	4.07	4.08	4.08	4.09	4.10	4.11	4.11	4.12	4.16	4.21
41	0.270	4.07	4.08	4.08	4.09	4.10	4.10	4.11	4.12	4.13	4.17	4.21
42	0.271	4.08	4.08	4.09	4.10	4.10	4.11	4.12	4.12	4.13	4.17	4.22
43	0.272	4.08	4.09	4.09	4.10	4.11	4.12	4.12	4.13	4.14	4.18	4.23
44	0.273	4.09	4.09	4.10	4.11	4.11	4.12	4.13	4.14	4.15	4.19	4.24
45	0.275	4.09	4.10	4.11	4.11	4.12	4.13	4.14	4.14	4.15	4.19	4.24
46	0.276	4.10	4.11	4.11	4.12	4.13	4.13	4.14	4.15	4.16	4.20	4.25
47	0.277	4.11	4.11	4.12	4.13	4.13	4.14	4.15	4.15	4.17	4.21	4.26
48	0.278	4.11	4.12	4.12	4.13	4.14	4.15	4.16	4.16	4.17	4.22	4.27
49	0.280	4.12	4.12	4.13	4.14	4.15	4.15	4.16	4.17	4.18	4.22	4.28
50	0.281	4.12	4.13	4.14	4.14	4.15	4.16	4.17	4.18	4.19	4.23	4.28

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	10 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
51	0.282	4.13	4.14	4.14	4.15	4.16	4.17	4.18	4.18	4.20	4.24	4.29
52	0.283	4.14	4.14	4.15	4.16	4.17	4.17	4.18	4.19	4.20	4.25	4.30
53	0.285	4.14	4.15	4.16	4.16	4.17	4.18	4.19	4.20	4.21	4.25	4.31
54	0.286	4.15	4.16	4.16	4.17	4.18	4.19	4.20	4.20	4.22	4.26	4.32
55	0.287	4.16	4.16	4.17	4.18	4.19	4.20	4.20	4.21	4.22	4.27	4.33
56	0.288	4.16	4.17	4.18	4.18	4.19	4.20	4.21	4.22	4.23	4.28	4.34
57	0.290	4.17	4.18	4.18	4.19	4.20	4.21	4.22	4.23	4.24	4.29	4.35
58	0.291	4.18	4.18	4.19	4.20	4.21	4.22	4.23	4.23	4.25	4.30	4.36
59	0.292	4.18	4.19	4.20	4.21	4.22	4.22	4.23	4.24	4.26	4.30	4.37
60	0.293	4.19	4.20	4.20	4.21	4.22	4.23	4.24	4.25	4.26	4.31	4.38
61	0.295	4.20	4.20	4.21	4.22	4.23	4.24	4.25	4.26	4.27	4.32	4.39
62	0.296	4.20	4.21	4.22	4.23	4.24	4.25	4.26	4.27	4.28	4.33	4.40
63	0.297	4.21	4.22	4.23	4.24	4.25	4.26	4.27	4.27	4.29	4.34	4.41
64	0.298	4.22	4.23	4.23	4.24	4.25	4.26	4.28	4.28	4.30	4.35	4.42
65	0.300	4.22	4.23	4.24	4.25	4.26	4.27	4.28	4.29	4.31	4.36	4.43
66	0.301	4.23	4.24	4.25	4.26	4.27	4.28	4.29	4.30	4.32	4.37	4.44
67	0.302	4.24	4.25	4.26	4.27	4.28	4.29	4.30	4.31	4.33	4.38	4.45
68	0.303	4.25	4.26	4.26	4.28	4.29	4.30	4.31	4.32	4.33	4.39	4.46
69	0.305	4.26	4.26	4.27	4.28	4.30	4.31	4.32	4.33	4.34	4.40	4.47
70	0.306	4.26	4.27	4.28	4.29	4.30	4.32	4.33	4.34	4.35	4.41	4.49
71	0.307	4.27	4.28	4.29	4.30	4.31	4.32	4.34	4.35	4.36	4.42	4.50
72	0.308	4.28	4.29	4.30	4.31	4.32	4.33	4.35	4.35	4.37	4.43	4.51
73	0.310	4.29	4.30	4.31	4.32	4.33	4.34	4.36	4.36	4.38	4.45	4.52
74	0.311	4.30	4.31	4.32	4.33	4.34	4.35	4.37	4.37	4.39	4.46	4.54
75	0.312	4.31	4.32	4.33	4.34	4.35	4.36	4.38	4.39	4.40	4.47	4.55
76	0.313	4.32	4.32	4.33	4.35	4.36	4.37	4.39	4.40	4.42	4.48	4.56
77	0.315	4.32	4.33	4.34	4.36	4.37	4.38	4.40	4.41	4.43	4.49	4.58
78	0.316	4.33	4.34	4.35	4.37	4.38	4.39	4.41	4.42	4.44	4.51	4.59
79	0.317	4.34	4.35	4.36	4.38	4.39	4.40	4.42	4.43	4.45	4.52	4.61
80	0.318	4.35	4.36	4.37	4.39	4.40	4.42	4.43	4.44	4.46	4.53	4.62
81	0.320	4.36	4.37	4.38	4.40	4.41	4.43	4.44	4.45	4.47	4.55	4.64
82	0.321	4.37	4.38	4.39	4.41	4.42	4.44	4.45	4.46	4.49	4.56	4.66
83	0.322	4.38	4.39	4.40	4.42	4.43	4.45	4.46	4.47	4.50	4.58	4.67
84	0.323	4.39	4.40	4.42	4.43	4.44	4.46	4.48	4.49	4.51	4.59	4.69
85	0.325	4.40	4.41	4.43	4.44	4.46	4.47	4.49	4.50	4.52	4.61	4.71
86	0.326	4.41	4.43	4.44	4.45	4.47	4.49	4.50	4.51	4.54	4.62	4.73
87	0.327	4.42	4.44	4.45	4.46	4.48	4.50	4.51	4.53	4.55	4.64	4.74
88	0.328	4.44	4.45	4.46	4.48	4.49	4.51	4.53	4.54	4.57	4.65	4.76
89	0.330	4.45	4.46	4.47	4.49	4.51	4.52	4.54	4.55	4.58	4.67	4.78
90	0.331	4.46	4.47	4.48	4.50	4.52	4.54	4.56	4.57	4.60	4.69	4.80
91	0.332	4.47	4.48	4.50	4.51	4.53	4.55	4.57	4.58	4.61	4.71	4.83
92	0.333	4.48	4.50	4.51	4.53	4.55	4.56	4.58	4.60	4.63	4.73	4.85
93	0.335	4.50	4.51	4.52	4.54	4.56	4.58	4.60	4.61	4.64	4.74	4.87
94	0.336	4.51	4.52	4.54	4.56	4.57	4.59	4.61	4.63	4.66	4.76	4.89
95	0.337	4.52	4.54	4.55	4.57	4.59	4.61	4.63	4.64	4.68	4.78	4.92
96	0.338	4.53	4.55	4.56	4.58	4.60	4.63	4.65	4.66	4.69	4.80	4.94
97	0.340	4.55	4.56	4.58	4.60	4.62	4.64	4.66	4.68	4.71	4.83	4.97
98	0.341	4.56	4.58	4.59	4.61	4.64	4.66	4.68	4.69	4.73	4.85	4.99
99	0.342	4.58	4.59	4.61	4.63	4.65	4.67	4.70	4.71	4.75	4.87	5.02
100	0.343	4.59	4.61	4.62	4.65	4.67	4.69	4.72	4.73	4.77	4.89	5.05
101	0.345	4.61	4.62	4.64	4.66	4.69	4.71	4.73	4.75	4.79	4.92	5.07
102	0.346	4.62	4.64	4.66	4.68	4.70	4.73	4.75	4.77	4.81	4.94	5.10

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	10 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
103	0.347	4.64	4.66	4.67	4.70	4.72	4.75	4.77	4.79	4.83	4.97	5.13
104	0.348	4.65	4.67	4.69	4.72	4.74	4.77	4.79	4.81	4.85	5.00	5.17
105	0.350	4.67	4.69	4.71	4.73	4.76	4.79	4.82	4.83	4.88	5.02	5.20
106	0.351	4.69	4.71	4.73	4.75	4.78	4.81	4.84	4.85	4.90	5.05	5.23
107	0.352	4.71	4.73	4.75	4.77	4.80	4.83	4.86	4.88	4.92	5.08	5.26
108	0.353	4.73	4.75	4.77	4.79	4.82	4.85	4.88	4.90	4.95	5.11	5.30
109	0.355	4.74	4.77	4.79	4.81	4.84	4.87	4.91	4.93	4.98	5.14	5.33
110	0.356	4.76	4.79	4.81	4.84	4.87	4.90	4.93	4.95	5.00	5.17	5.37
111	0.357	4.78	4.81	4.83	4.86	4.89	4.92	4.96	4.98	5.03	5.21	5.40
112	0.358	4.81	4.83	4.85	4.88	4.91	4.95	4.98	5.01	5.06	5.24	5.44
113	0.360	4.83	4.85	4.87	4.91	4.94	4.97	5.01	5.03	5.09	5.28	5.48
114	0.361	4.85	4.87	4.90	4.93	4.96	5.00	5.04	5.06	5.12	5.31	5.51
115	0.362	4.87	4.90	4.92	4.96	4.99	5.03	5.07	5.09	5.15	5.35	5.55
116	0.363	4.90	4.92	4.95	4.98	5.02	5.06	5.10	5.12	5.19	5.39	5.59
117	0.365	4.92	4.95	4.98	5.01	5.05	5.09	5.13	5.15	5.22	5.42	5.63
118	0.366	4.95	4.97	5.00	5.04	5.08	5.12	5.16	5.19	5.25	5.46	5.66
119	0.367	4.97	5.00	5.03	5.07	5.11	5.15	5.19	5.22	5.29	5.50	5.70
120	0.368	5.00	5.03	5.06	5.10	5.14	5.18	5.23	5.26	5.33	5.54	5.74
121	0.370	5.03	5.06	5.09	5.13	5.17	5.22	5.26	5.29	5.36	5.58	5.77
122	0.371	5.06	5.09	5.12	5.16	5.21	5.25	5.30	5.33	5.40	5.62	5.81
123	0.372	5.09	5.12	5.15	5.20	5.24	5.29	5.34	5.37	5.44	5.66	5.85
124	0.373	5.12	5.15	5.19	5.23	5.28	5.32	5.37	5.41	5.48	5.70	5.88
125	0.375	5.15	5.19	5.22	5.27	5.31	5.36	5.41	5.44	5.52	5.74	5.92
126	0.376	5.19	5.22	5.26	5.30	5.35	5.40	5.45	5.48	5.56	5.78	5.95
127	0.377	5.22	5.26	5.29	5.34	5.39	5.44	5.49	5.53	5.60	5.82	5.98
128	0.378	5.26	5.29	5.33	5.38	5.43	5.48	5.53	5.57	5.64	5.86	6.01
129	0.380	5.29	5.33	5.37	5.42	5.47	5.52	5.58	5.61	5.69	5.89	6.05
130	0.381	5.33	5.37	5.41	5.46	5.51	5.56	5.62	5.65	5.73	5.93	6.08
131	0.382	5.37	5.41	5.45	5.50	5.55	5.61	5.66	5.69	5.77	5.97	6.11
132	0.383	5.41	5.45	5.49	5.54	5.59	5.65	5.70	5.73	5.81	6.00	6.14
133	0.385	5.45	5.50	5.54	5.59	5.64	5.69	5.74	5.78	5.85	6.04	6.16
134	0.386	5.50	5.54	5.58	5.63	5.68	5.73	5.79	5.82	5.89	6.07	6.19
135	0.387	5.54	5.58	5.62	5.67	5.72	5.77	5.83	5.86	5.93	6.11	6.22
136	0.388	5.58	5.62	5.67	5.71	5.77	5.82	5.87	5.90	5.97	6.14	6.24
137	0.390	5.63	5.67	5.71	5.76	5.81	5.86	5.91	5.94	6.01	6.17	6.27
138	0.391	5.67	5.71	5.75	5.80	5.85	5.90	5.95	5.98	6.04	6.20	6.29
139	0.392	5.72	5.76	5.80	5.84	5.89	5.94	5.99	6.02	6.08	6.23	6.32
140	0.393	5.76	5.80	5.84	5.88	5.93	5.98	6.03	6.05	6.12	6.26	6.34
141	0.395	5.80	5.84	5.88	5.93	5.97	6.02	6.06	6.09	6.15	6.29	6.36
142	0.396	5.85	5.89	5.92	5.97	6.01	6.06	6.10	6.13	6.18	6.31	6.39
143	0.397	5.89	5.93	5.96	6.01	6.05	6.09	6.14	6.16	6.22	6.34	6.41
144	0.398	5.93	5.97	6.00	6.05	6.09	6.13	6.17	6.20	6.25	6.36	6.43
145	0.400	5.98	6.01	6.04	6.08	6.12	6.17	6.20	6.23	6.28	6.39	6.45
146	0.401	6.02	6.05	6.08	6.12	6.16	6.20	6.24	6.26	6.31	6.41	6.47
147	0.402	6.06	6.09	6.12	6.16	6.19	6.23	6.27	6.29	6.34	6.43	6.49
148	0.403	6.10	6.13	6.15	6.19	6.23	6.26	6.30	6.32	6.36	6.46	6.50
149	0.405	6.13	6.16	6.19	6.22	6.26	6.30	6.33	6.35	6.39	6.48	6.52
150	0.406	6.17	6.20	6.22	6.26	6.29	6.32	6.36	6.38	6.42	6.50	6.54
151	0.407	6.20	6.23	6.26	6.29	6.32	6.35	6.39	6.40	6.44	6.52	6.56
152	0.408	6.24	6.26	6.29	6.32	6.35	6.38	6.41	6.43	6.47	6.54	6.57
153	0.410	6.27	6.30	6.32	6.35	6.38	6.41	6.44	6.45	6.49	6.56	6.59
154	0.411	6.30	6.33	6.35	6.38	6.41	6.44	6.46	6.48	6.51	6.58	6.61

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	10 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
155	0.412	6.33	6.36	6.38	6.40	6.43	6.46	6.49	6.50	6.53	6.59	6.62
156	0.413	6.36	6.39	6.40	6.43	6.46	6.49	6.51	6.53	6.56	6.61	6.64
157	0.415	6.39	6.41	6.43	6.46	6.48	6.51	6.53	6.55	6.58	6.63	6.65
158	0.416	6.42	6.44	6.46	6.48	6.51	6.53	6.56	6.57	6.60	6.65	6.67
159	0.417	6.45	6.47	6.48	6.51	6.53	6.55	6.58	6.59	6.61	6.66	6.68
160	0.418	6.47	6.49	6.51	6.53	6.55	6.58	6.60	6.61	6.63	6.68	6.70
161	0.420	6.50	6.51	6.53	6.55	6.57	6.60	6.62	6.63	6.65	6.69	6.71
162	0.421	6.52	6.54	6.55	6.57	6.59	6.62	6.64	6.65	6.67	6.71	6.72
163	0.422	6.55	6.56	6.57	6.59	6.62	6.64	6.65	6.66	6.69	6.72	6.74
164	0.423	6.57	6.58	6.60	6.61	6.63	6.65	6.67	6.68	6.70	6.74	6.75
165	0.425	6.59	6.60	6.62	6.63	6.65	6.67	6.69	6.70	6.72	6.75	6.76
166	0.426	6.61	6.62	6.64	6.65	6.67	6.69	6.71	6.72	6.73	6.76	6.77
167	0.427	6.63	6.64	6.65	6.67	6.69	6.71	6.72	6.73	6.75	6.78	6.79
168	0.428	6.65	6.66	6.67	6.69	6.71	6.72	6.74	6.75	6.76	6.79	6.80
169	0.430	6.67	6.68	6.69	6.71	6.72	6.74	6.76	6.76	6.78	6.80	6.81
170	0.431	6.69	6.70	6.71	6.72	6.74	6.76	6.77	6.78	6.79	6.81	6.82
171	0.432	6.70	6.72	6.73	6.74	6.76	6.77	6.79	6.79	6.81	6.83	6.83
172	0.433	6.72	6.73	6.74	6.76	6.77	6.79	6.80	6.81	6.82	6.84	6.84
173	0.435	6.74	6.75	6.76	6.77	6.79	6.80	6.81	6.82	6.83	6.85	6.85
174	0.436	6.75	6.76	6.77	6.79	6.80	6.82	6.83	6.83	6.84	6.86	6.86
175	0.437	6.77	6.78	6.79	6.80	6.82	6.83	6.84	6.85	6.86	6.87	6.87
176	0.438	6.79	6.79	6.80	6.82	6.83	6.84	6.85	6.86	6.87	6.88	6.88
177	0.440	6.80	6.81	6.82	6.83	6.84	6.85	6.87	6.87	6.88	6.89	6.89
178	0.441	6.82	6.82	6.83	6.84	6.86	6.87	6.88	6.88	6.89	6.90	6.90
179	0.442	6.83	6.84	6.84	6.86	6.87	6.88	6.89	6.89	6.90	6.91	6.91
180	0.443	6.84	6.85	6.86	6.87	6.88	6.89	6.90	6.91	6.91	6.93	6.92
181	0.445	6.86	6.86	6.87	6.88	6.89	6.90	6.91	6.92	6.93	6.93	6.93
182	0.446	6.87	6.88	6.88	6.89	6.91	6.92	6.92	6.93	6.94	6.94	6.94
183	0.447	6.88	6.89	6.90	6.91	6.92	6.93	6.94	6.94	6.95	6.95	6.95
184	0.448	6.90	6.90	6.91	6.92	6.93	6.94	6.95	6.95	6.96	6.96	6.96
185	0.450	6.91	6.91	6.92	6.93	6.94	6.95	6.96	6.96	6.97	6.97	6.97
186	0.451	6.92	6.93	6.93	6.94	6.95	6.96	6.97	6.97	6.98	6.98	6.98
187	0.452	6.93	6.94	6.94	6.95	6.96	6.97	6.98	6.98	6.99	6.99	6.99
188	0.453	6.94	6.95	6.95	6.96	6.97	6.98	6.99	6.99	7.00	7.00	7.00
189	0.455	6.95	6.96	6.96	6.97	6.98	6.99	7.00	7.00	7.00	7.01	7.00
190	0.456	6.96	6.97	6.97	6.98	6.99	7.00	7.01	7.01	7.01	7.02	7.01
191	0.457	6.97	6.98	6.99	6.99	7.00	7.01	7.02	7.02	7.02	7.03	7.02
192	0.458	6.98	6.99	7.00	7.00	7.01	7.02	7.02	7.03	7.03	7.03	7.03
193	0.460	6.99	7.00	7.01	7.01	7.02	7.03	7.03	7.04	7.04	7.04	7.04
194	0.461	7.00	7.01	7.01	7.02	7.03	7.04	7.04	7.04	7.05	7.05	7.04
195	0.462	7.01	7.02	7.02	7.03	7.04	7.05	7.05	7.05	7.06	7.06	7.05
196	0.463	7.02	7.03	7.03	7.04	7.05	7.05	7.06	7.06	7.06	7.07	7.06
197	0.465	7.03	7.04	7.04	7.05	7.06	7.06	7.07	7.07	7.07	7.07	7.07
198	0.466	7.04	7.05	7.05	7.06	7.07	7.07	7.08	7.08	7.08	7.08	7.07
199	0.467	7.05	7.06	7.06	7.07	7.07	7.08	7.08	7.09	7.09	7.09	7.08
200	0.468	7.06	7.06	7.07	7.08	7.08	7.09	7.09	7.09	7.10	7.10	7.09
201	0.470	7.07	7.07	7.08	7.08	7.09	7.10	7.10	7.10	7.10	7.10	7.10

Table 6

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	20 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
1	0.000	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.52
2	0.221	3.84	3.84	3.84	3.85	3.85	3.85	3.86	3.86	3.86	3.88	3.89
3	0.222	3.84	3.85	3.85	3.85	3.85	3.86	3.86	3.86	3.87	3.88	3.90
4	0.224	3.85	3.85	3.85	3.86	3.86	3.86	3.87	3.87	3.87	3.89	3.90
5	0.225	3.85	3.85	3.86	3.86	3.86	3.87	3.87	3.87	3.88	3.89	3.91
6	0.226	3.86	3.86	3.86	3.86	3.87	3.87	3.87	3.88	3.88	3.90	3.91
7	0.227	3.86	3.86	3.87	3.87	3.87	3.88	3.88	3.88	3.89	3.90	3.92
8	0.229	3.86	3.87	3.87	3.87	3.88	3.88	3.88	3.89	3.89	3.91	3.92
9	0.230	3.87	3.87	3.87	3.88	3.88	3.88	3.89	3.89	3.90	3.91	3.93
10	0.231	3.87	3.88	3.88	3.88	3.89	3.89	3.89	3.90	3.90	3.92	3.93
11	0.232	3.88	3.88	3.88	3.89	3.89	3.89	3.90	3.90	3.90	3.92	3.94
12	0.234	3.88	3.89	3.89	3.89	3.89	3.90	3.90	3.91	3.91	3.93	3.94
13	0.235	3.89	3.89	3.89	3.90	3.90	3.90	3.91	3.91	3.91	3.93	3.95
14	0.236	3.89	3.89	3.90	3.90	3.90	3.91	3.91	3.92	3.92	3.94	3.95
15	0.237	3.90	3.90	3.90	3.91	3.91	3.91	3.92	3.92	3.92	3.94	3.96
16	0.239	3.90	3.90	3.91	3.91	3.91	3.92	3.92	3.93	3.93	3.95	3.97
17	0.240	3.91	3.91	3.91	3.92	3.92	3.92	3.93	3.93	3.94	3.95	3.97
18	0.241	3.91	3.91	3.92	3.92	3.92	3.93	3.93	3.94	3.94	3.96	3.98
19	0.242	3.92	3.92	3.92	3.93	3.93	3.93	3.94	3.94	3.95	3.96	3.98
20	0.244	3.92	3.92	3.93	3.93	3.93	3.94	3.94	3.95	3.95	3.97	3.99
21	0.245	3.93	3.93	3.93	3.94	3.94	3.94	3.95	3.95	3.96	3.97	3.99
22	0.246	3.93	3.93	3.94	3.94	3.94	3.95	3.95	3.96	3.96	3.98	4.00
23	0.247	3.94	3.94	3.94	3.95	3.95	3.95	3.96	3.96	3.97	3.99	4.01
24	0.249	3.94	3.94	3.95	3.95	3.96	3.96	3.96	3.97	3.97	3.99	4.01
25	0.250	3.95	3.95	3.95	3.96	3.96	3.96	3.97	3.97	3.98	4.00	4.02
26	0.251	3.95	3.95	3.96	3.96	3.97	3.97	3.97	3.98	3.98	4.00	4.02
27	0.252	3.96	3.96	3.96	3.97	3.97	3.98	3.98	3.99	3.99	4.01	4.03
28	0.253	3.96	3.96	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.02	4.04
29	0.255	3.97	3.97	3.97	3.98	3.98	3.99	3.99	4.00	4.00	4.02	4.04
30	0.256	3.97	3.98	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.03	4.05
31	0.257	3.98	3.98	3.98	3.99	3.99	4.00	4.00	4.01	4.01	4.03	4.06
32	0.258	3.98	3.99	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.04	4.06
33	0.260	3.99	3.99	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.05	4.07
34	0.261	3.99	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.03	4.05	4.08
35	0.262	4.00	4.00	4.01	4.01	4.02	4.02	4.03	4.03	4.04	4.06	4.08
36	0.263	4.01	4.01	4.01	4.02	4.02	4.03	4.03	4.04	4.04	4.07	4.09
37	0.265	4.01	4.02	4.02	4.02	4.03	4.03	4.04	4.05	4.05	4.07	4.10
38	0.266	4.02	4.02	4.03	4.03	4.04	4.04	4.05	4.05	4.06	4.08	4.11
39	0.267	4.02	4.03	4.03	4.04	4.04	4.05	4.05	4.06	4.06	4.09	4.11
40	0.268	4.03	4.03	4.04	4.04	4.05	4.05	4.06	4.06	4.07	4.09	4.12
41	0.270	4.03	4.04	4.04	4.05	4.05	4.06	4.07	4.07	4.08	4.10	4.13
42	0.271	4.04	4.05	4.05	4.06	4.06	4.07	4.07	4.08	4.08	4.11	4.14
43	0.272	4.05	4.05	4.06	4.06	4.07	4.07	4.08	4.09	4.09	4.12	4.14
44	0.273	4.05	4.06	4.06	4.07	4.07	4.08	4.09	4.09	4.10	4.12	4.15
45	0.275	4.06	4.06	4.07	4.08	4.08	4.09	4.09	4.10	4.11	4.13	4.16
46	0.276	4.07	4.07	4.08	4.08	4.09	4.09	4.10	4.11	4.11	4.14	4.17
47	0.277	4.07	4.08	4.08	4.09	4.09	4.10	4.11	4.11	4.12	4.15	4.18
48	0.278	4.08	4.08	4.09	4.10	4.10	4.11	4.11	4.12	4.13	4.15	4.18
49	0.280	4.09	4.09	4.10	4.10	4.11	4.12	4.12	4.13	4.13	4.16	4.19
50	0.281	4.09	4.10	4.10	4.11	4.12	4.12	4.13	4.14	4.14	4.17	4.20

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	20 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
51	0.282	4.10	4.11	4.11	4.12	4.12	4.13	4.14	4.14	4.15	4.18	4.21
52	0.283	4.11	4.11	4.12	4.12	4.13	4.14	4.14	4.15	4.16	4.19	4.22
53	0.285	4.11	4.12	4.12	4.13	4.14	4.14	4.15	4.16	4.17	4.20	4.23
54	0.286	4.12	4.13	4.13	4.14	4.15	4.15	4.16	4.17	4.17	4.20	4.24
55	0.287	4.13	4.13	4.14	4.15	4.15	4.16	4.17	4.17	4.18	4.21	4.25
56	0.288	4.14	4.14	4.15	4.15	4.16	4.17	4.18	4.18	4.19	4.22	4.26
57	0.290	4.14	4.15	4.16	4.16	4.17	4.18	4.18	4.19	4.20	4.23	4.27
58	0.291	4.15	4.16	4.16	4.17	4.18	4.18	4.19	4.20	4.21	4.24	4.28
59	0.292	4.16	4.17	4.17	4.18	4.19	4.19	4.20	4.21	4.22	4.25	4.29
60	0.293	4.17	4.17	4.18	4.19	4.19	4.20	4.21	4.22	4.23	4.26	4.30
61	0.295	4.17	4.18	4.19	4.19	4.20	4.21	4.22	4.23	4.23	4.27	4.31
62	0.296	4.18	4.19	4.20	4.20	4.21	4.22	4.23	4.23	4.24	4.28	4.32
63	0.297	4.19	4.20	4.20	4.21	4.22	4.23	4.24	4.24	4.25	4.29	4.33
64	0.298	4.20	4.21	4.21	4.22	4.23	4.24	4.24	4.25	4.26	4.30	4.34
65	0.300	4.21	4.21	4.22	4.23	4.24	4.25	4.25	4.26	4.27	4.31	4.35
66	0.301	4.22	4.22	4.23	4.24	4.25	4.25	4.26	4.27	4.28	4.32	4.36
67	0.302	4.23	4.23	4.24	4.25	4.26	4.26	4.27	4.28	4.29	4.33	4.37
68	0.303	4.23	4.24	4.25	4.26	4.26	4.27	4.28	4.29	4.30	4.34	4.38
69	0.305	4.24	4.25	4.26	4.27	4.27	4.28	4.29	4.30	4.31	4.35	4.40
70	0.306	4.25	4.26	4.27	4.28	4.28	4.29	4.30	4.31	4.32	4.36	4.41
71	0.307	4.26	4.27	4.28	4.28	4.29	4.30	4.31	4.32	4.33	4.37	4.42
72	0.308	4.27	4.28	4.29	4.29	4.30	4.31	4.32	4.33	4.34	4.39	4.43
73	0.310	4.28	4.29	4.30	4.30	4.31	4.32	4.33	4.34	4.35	4.40	4.45
74	0.311	4.29	4.30	4.31	4.32	4.32	4.33	4.34	4.36	4.37	4.41	4.46
75	0.312	4.30	4.31	4.32	4.33	4.34	4.35	4.36	4.37	4.38	4.42	4.47
76	0.313	4.31	4.32	4.33	4.34	4.35	4.36	4.37	4.38	4.39	4.44	4.49
77	0.315	4.32	4.33	4.34	4.35	4.36	4.37	4.38	4.39	4.40	4.45	4.50
78	0.316	4.33	4.34	4.35	4.36	4.37	4.38	4.39	4.40	4.41	4.46	4.51
79	0.317	4.34	4.35	4.36	4.37	4.38	4.39	4.40	4.41	4.43	4.47	4.53
80	0.318	4.35	4.36	4.37	4.38	4.39	4.40	4.41	4.43	4.44	4.49	4.54
81	0.320	4.36	4.37	4.38	4.39	4.40	4.41	4.43	4.44	4.45	4.50	4.56
82	0.321	4.38	4.38	4.39	4.40	4.42	4.43	4.44	4.45	4.46	4.52	4.57
83	0.322	4.39	4.40	4.40	4.42	4.43	4.44	4.45	4.46	4.48	4.53	4.59
84	0.323	4.40	4.41	4.42	4.43	4.44	4.45	4.46	4.48	4.49	4.55	4.61
85	0.325	4.41	4.42	4.43	4.44	4.45	4.47	4.48	4.49	4.50	4.56	4.62
86	0.326	4.42	4.43	4.44	4.45	4.47	4.48	4.49	4.51	4.52	4.58	4.64
87	0.327	4.43	4.44	4.45	4.47	4.48	4.49	4.51	4.52	4.53	4.59	4.66
88	0.328	4.45	4.46	4.47	4.48	4.49	4.51	4.52	4.53	4.55	4.61	4.68
89	0.330	4.46	4.47	4.48	4.49	4.51	4.52	4.53	4.55	4.56	4.63	4.69
90	0.331	4.47	4.48	4.50	4.51	4.52	4.54	4.55	4.56	4.58	4.64	4.71
91	0.332	4.49	4.50	4.51	4.52	4.54	4.55	4.56	4.58	4.60	4.66	4.73
92	0.333	4.50	4.51	4.52	4.54	4.55	4.57	4.58	4.60	4.61	4.68	4.75
93	0.335	4.52	4.53	4.54	4.55	4.57	4.58	4.60	4.61	4.63	4.70	4.77
94	0.336	4.53	4.54	4.55	4.57	4.58	4.60	4.61	4.63	4.64	4.71	4.79
95	0.337	4.54	4.56	4.57	4.58	4.60	4.61	4.63	4.65	4.66	4.73	4.81
96	0.338	4.56	4.57	4.58	4.60	4.61	4.63	4.65	4.66	4.68	4.75	4.84
97	0.340	4.58	4.59	4.60	4.62	4.63	4.65	4.66	4.68	4.70	4.77	4.86
98	0.341	4.59	4.60	4.62	4.63	4.65	4.67	4.68	4.70	4.72	4.79	4.88
99	0.342	4.61	4.62	4.63	4.65	4.67	4.68	4.70	4.72	4.74	4.81	4.90
100	0.343	4.62	4.64	4.65	4.67	4.68	4.70	4.72	4.74	4.76	4.84	4.93
101	0.345	4.64	4.65	4.67	4.69	4.70	4.72	4.74	4.76	4.78	4.86	4.95
102	0.346	4.66	4.67	4.69	4.70	4.72	4.74	4.76	4.78	4.80	4.88	4.98

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	20 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
103	0.347	4.68	4.69	4.70	4.72	4.74	4.76	4.78	4.80	4.82	4.90	5.00
104	0.348	4.69	4.71	4.72	4.74	4.76	4.78	4.80	4.82	4.84	4.93	5.03
105	0.350	4.71	4.73	4.74	4.76	4.78	4.80	4.82	4.84	4.86	4.95	5.05
106	0.351	4.73	4.75	4.76	4.78	4.80	4.82	4.84	4.86	4.88	4.98	5.08
107	0.352	4.75	4.77	4.78	4.80	4.82	4.84	4.86	4.89	4.91	5.00	5.11
108	0.353	4.77	4.79	4.80	4.82	4.85	4.87	4.89	4.91	4.93	5.03	5.14
109	0.355	4.79	4.81	4.83	4.85	4.87	4.89	4.91	4.93	4.96	5.06	5.17
110	0.356	4.81	4.83	4.85	4.87	4.89	4.91	4.94	4.96	4.98	5.08	5.20
111	0.357	4.84	4.85	4.87	4.89	4.91	4.94	4.96	4.98	5.01	5.11	5.23
112	0.358	4.86	4.88	4.89	4.92	4.94	4.96	4.99	5.01	5.03	5.14	5.26
113	0.360	4.88	4.90	4.92	4.94	4.96	4.99	5.01	5.04	5.06	5.17	5.29
114	0.361	4.90	4.92	4.94	4.97	4.99	5.01	5.04	5.06	5.09	5.20	5.32
115	0.362	4.93	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.23	5.35
116	0.363	4.95	4.97	4.99	5.02	5.04	5.07	5.09	5.12	5.15	5.26	5.39
117	0.365	4.98	5.00	5.02	5.04	5.07	5.10	5.12	5.15	5.18	5.29	5.42
118	0.366	5.01	5.03	5.05	5.07	5.10	5.12	5.15	5.18	5.21	5.32	5.45
119	0.367	5.03	5.05	5.07	5.10	5.13	5.15	5.18	5.21	5.24	5.36	5.49
120	0.368	5.06	5.08	5.10	5.13	5.16	5.18	5.21	5.24	5.27	5.39	5.52
121	0.370	5.09	5.11	5.13	5.16	5.19	5.21	5.24	5.27	5.30	5.42	5.56
122	0.371	5.12	5.14	5.16	5.19	5.22	5.25	5.27	5.30	5.33	5.46	5.59
123	0.372	5.15	5.17	5.19	5.22	5.25	5.28	5.31	5.34	5.37	5.49	5.63
124	0.373	5.18	5.20	5.22	5.25	5.28	5.31	5.34	5.37	5.40	5.53	*5.66*
125	0.375	5.21	5.23	5.26	5.29	5.31	5.34	5.37	5.40	5.43	5.56	*5.70*
126	0.376	5.24	5.27	5.29	5.32	5.35	5.38	5.41	5.44	5.47	5.60	*5.73*
127	0.377	5.27	5.30	5.32	5.35	5.38	5.41	5.44	5.47	5.50	5.63	*5.77*
128	0.378	5.31	5.33	5.36	5.39	5.42	5.45	5.48	5.51	5.54	5.67	*5.80*
129	0.380	5.34	5.37	5.39	5.42	5.45	5.48	5.51	5.54	5.57	5.70	*5.84*
130	0.381	5.37	5.40	5.43	5.46	5.49	5.52	5.55	5.58	5.61	5.74	*5.87*
131	0.382	5.41	5.44	5.46	5.49	5.52	5.55	5.58	5.62	5.65	5.78	*5.91*
132	0.383	5.44	5.47	5.50	5.53	5.56	5.59	5.62	5.65	5.68	5.81	*5.94*
133	0.385	5.48	5.51	5.53	5.57	5.60	5.63	5.66	5.69	5.72	5.85	*5.98*
134	0.386	5.52	5.55	5.57	5.60	5.63	5.66	5.69	5.73	5.76	5.88	*6.01*
135	0.387	5.56	5.58	5.61	5.64	5.67	5.70	5.73	5.76	5.79	5.92	*6.04*
136	0.388	5.59	5.62	5.65	5.68	5.71	5.74	5.77	5.80	5.83	5.95	*6.08*
137	0.390	5.63	5.66	5.68	5.72	5.74	5.77	5.80	5.83	5.86	5.99	6.11
138	0.391	5.67	5.70	5.72	5.75	5.78	5.81	5.84	5.87	5.90	6.02	6.14
139	0.392	5.71	5.73	5.76	5.79	5.82	5.85	5.88	5.91	5.94	6.06	6.17
140	0.393	5.75	5.77	5.80	5.83	5.86	5.88	5.91	5.94	5.97	6.09	6.20
141	0.395	5.78	5.81	5.84	5.86	5.89	5.92	5.95	5.98	6.01	6.12	6.23
142	0.396	5.82	5.85	5.87	5.90	5.93	5.96	5.99	6.01	6.04	6.16	6.26
143	0.397	5.86	5.89	5.91	5.94	5.97	5.99	6.02	6.05	6.08	6.19	6.29
144	0.398	5.90	5.92	5.95	5.98	6.00	6.03	6.06	6.08	6.11	6.22	6.32
145	0.400	5.94	5.96	5.98	6.01	6.04	6.06	6.09	6.12	6.14	6.25	6.35
146	0.401	5.97	6.00	6.02	6.05	6.07	6.10	6.12	6.15	6.18	6.28	6.38
147	0.402	6.01	6.04	6.06	6.08	6.11	6.13	6.16	6.18	6.21	6.31	6.41
148	0.403	6.05	6.07	6.09	6.12	6.14	6.17	6.19	6.22	6.24	6.34	6.43
149	0.405	6.08	6.11	6.13	6.15	6.17	6.20	6.22	6.25	6.27	6.37	6.46
150	0.406	6.12	6.14	6.16	6.18	6.21	6.23	6.25	6.28	6.30	6.40	6.49
151	0.407	6.16	6.18	6.20	6.22	6.24	6.26	6.29	6.31	6.33	6.43	6.51
152	0.408	6.19	6.21	6.23	6.25	6.27	6.29	6.32	6.34	6.36	6.45	6.53
153	0.410	6.22	6.24	6.26	6.28	6.30	6.32	6.35	6.37	6.39	6.48	6.56
154	0.411	6.26	6.28	6.29	6.31	6.33	6.35	6.38	6.40	6.42	6.51	6.58

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12
	Altot [µmol/l]	20 ppm TOC										
ROW	Base [mMol/l]	0.50	1.50	2.50	3.75	5.00	6.25	7.50	8.75	10.00	15.00	20.00
155	0.412	6.29	6.31	6.32	6.34	6.36	6.38	6.40	6.43	6.45	6.53	6.60
156	0.413	6.32	6.34	6.36	6.37	6.39	6.41	6.43	6.45	6.47	6.56	6.62
157	0.415	6.35	6.37	6.38	6.40	6.42	6.44	6.46	6.48	6.50	6.58	6.65
158	0.416	6.38	6.40	6.41	6.43	6.45	6.47	6.49	6.51	6.53	6.60	6.67
159	0.417	6.41	6.43	6.44	6.46	6.48	6.49	6.51	6.53	6.55	6.63	6.69
160	0.418	6.44	6.46	6.47	6.49	6.50	6.52	6.54	6.56	6.58	6.65	6.71
161	0.420	6.47	6.48	6.50	6.51	6.53	6.55	6.56	6.58	6.60	6.67	6.72
162	0.421	6.50	6.51	6.52	6.54	6.55	6.57	6.59	6.61	6.62	6.69	6.74
163	0.422	6.52	6.54	6.55	6.56	6.58	6.59	6.61	6.63	6.65	6.71	6.76
164	0.423	6.55	6.56	6.57	6.59	6.60	6.62	6.63	6.65	6.67	6.73	6.78
165	0.425	6.57	6.59	6.60	6.61	6.62	6.64	6.66	6.67	6.69	6.75	6.80
166	0.426	6.60	6.61	6.62	6.63	6.65	6.66	6.68	6.69	6.71	6.77	6.81
167	0.427	6.62	6.64	6.65	6.66	6.67	6.68	6.70	6.71	6.73	6.79	6.83
168	0.428	6.65	6.66	6.67	6.68	6.69	6.70	6.72	6.73	6.75	6.80	6.84
169	0.430	6.67	6.68	6.69	6.70	6.71	6.73	6.74	6.75	6.77	6.82	6.86
170	0.431	6.69	6.70	6.71	6.72	6.73	6.75	6.76	6.77	6.79	6.84	6.87
171	0.432	6.71	6.72	6.73	6.74	6.75	6.76	6.78	6.79	6.81	6.85	6.89
172	0.433	6.73	6.74	6.75	6.76	6.77	6.78	6.80	6.81	6.82	6.87	6.90
173	0.435	6.75	6.76	6.77	6.78	6.79	6.80	6.81	6.83	6.84	6.89	6.92
174	0.436	6.77	6.78	6.79	6.80	6.81	6.82	6.83	6.84	6.86	6.90	6.93
175	0.437	6.79	6.80	6.81	6.82	6.83	6.84	6.85	6.86	6.87	6.92	6.94
176	0.438	6.81	6.82	6.83	6.83	6.84	6.85	6.87	6.88	6.89	6.93	6.96
177	0.440	6.83	6.84	6.84	6.85	6.86	6.87	6.88	6.89	6.90	6.94	6.97
178	0.441	6.85	6.85	6.86	6.87	6.88	6.89	6.90	6.91	6.92	6.96	6.98
179	0.442	6.86	6.87	6.88	6.88	6.89	6.90	6.91	6.92	6.93	6.97	6.99
180	0.443	6.88	6.89	6.89	6.90	6.91	6.92	6.93	6.94	6.95	6.98	7.01
181	0.445	6.90	6.90	6.91	6.92	6.92	6.93	6.94	6.95	6.96	7.00	7.02
182	0.446	6.91	6.92	6.92	6.93	6.94	6.95	6.96	6.97	6.98	7.01	7.03
183	0.447	6.93	6.93	6.94	6.95	6.95	6.96	6.97	6.98	6.99	7.02	7.04
184	0.448	6.94	6.95	6.95	6.96	6.97	6.98	6.98	6.99	7.00	7.03	7.05
185	0.450	6.96	6.96	6.97	6.97	6.98	6.99	7.00	7.01	7.02	7.04	7.06
186	0.451	6.97	6.98	6.98	6.99	6.99	7.00	7.01	7.02	7.03	7.06	7.07
187	0.452	6.98	6.99	6.99	7.00	7.01	7.01	7.02	7.03	7.04	7.07	7.08
188	0.453	7.00	7.00	7.01	7.01	7.02	7.03	7.04	7.04	7.05	7.08	7.09
189	0.455	7.01	7.02	7.02	7.03	7.03	7.04	7.05	7.06	7.06	7.09	7.10
190	0.456	7.02	7.03	7.03	7.04	7.04	7.05	7.06	7.07	7.07	7.10	7.11
191	0.457	7.04	7.04	7.05	7.05	7.06	7.06	7.07	7.08	7.09	7.11	7.12
192	0.458	7.05	7.05	7.06	7.06	7.07	7.07	7.08	7.09	7.10	7.12	7.13
193	0.460	7.06	7.07	7.07	7.07	7.08	7.09	7.09	7.10	7.11	7.13	7.14
194	0.461	7.07	7.08	7.08	7.09	7.09	7.10	7.10	7.11	7.12	7.14	7.15
195	0.462	7.08	7.09	7.09	7.10	7.10	7.11	7.11	7.12	7.13	7.15	7.16
196	0.463	7.09	7.10	7.10	7.11	7.11	7.12	7.13	7.13	7.14	7.16	7.17
197	0.465	7.11	7.11	7.11	7.12	7.12	7.13	7.14	7.14	7.15	7.17	7.18
198	0.466	7.12	7.12	7.12	7.13	7.13	7.14	7.15	7.15	7.16	7.18	7.18
199	0.467	7.13	7.13	7.13	7.14	7.14	7.15	7.15	7.16	7.17	7.18	7.19
200	0.468	7.14	7.14	7.14	7.15	7.15	7.16	7.16	7.17	7.18	7.19	7.20
201	0.470	7.15	7.15	7.15	7.16	7.16	7.17	7.17	7.18	7.19	7.20	7.21

Table 7

pH class	TOC class [ppm]	0	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25
	Al (tot)	0 ± 0	1363.1 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0
	Al (tot) Max.	0	1363.1	0	0	0	0	0	0	0	0	0
3	Al (tot) Min.	0	1363.1	0	0	0	0	0	0	0	0	0
	Al (tot) range	0	0	0	0	0	0	0	0	0	0	0
	observations	0	1	0	0	0	0	0	0	0	0	0
	Al (tot)	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	6.2 ± 0	6.7 ± 0	7.2 ± 0	10 ± 19.6
	Al (tot) Max.	0	0	0	0	0	0	0	6.2	6.7	7.2	22.1
4	Al (tot) Min.	0	0	0	0	0	0	0	6.2	6.7	7.2	2.5
	Al (tot) range	0	0	0	0	0	0	0	0	0	0	19.6
	observations	0	0	0	0	0	0	1	1	2	4	9
	Al (tot)	0 ± 0	0 ± 0	10.5 ± 0	11.6 ± 0	4.8 ± 9.1	1.4 ± 0	7.5 ± 9	8.6 ± 15.1	9.7 ± 16.9	7.3 ± 18.5	6.2 ± 9.7
	Al (tot) Max.	0	0	10.5	11.6	9.9	1.4	13.1	17.1	20.1	20.6	11.4
4.5	Al (tot) Min.	0	0	10.5	11.6	0.8	1.4	4.1	2	3.2	2.1	1.7
	Al (tot) range	0	0	0	0	9.1	0	9	15.1	16.9	18.5	9.7
	observations	0	0	2	4	16	8	8	32	27	25	12
	Al (tot)	0 ± 0	0 ± 0	3.4 ± 8.2	3.5 ± 6.9	9.4 ± 7.4	9.9 ± 14.2	8.3 ± 13.5	9 ± 14.9	10.5 ± 18	9.9 ± 13.1	12.7 ± 14.7
	Al (tot) Max.	0	0	8.6	8.3	12.9	16.2	17	17.4	21.2	14.1	23.3
5	Al (tot) Min.	0	0	0.4	1.4	5.5	2	3.5	2.5	3.2	1	8.6
	Al (tot) range	0	0	8.2	6.9	7.4	14.2	13.5	14.9	18	13.1	14.7
	observations	0	3	7	15	12	32	45	47	58	22	18
	Al (tot)	2.7 ± 0	1.5 ± 0	2.7 ± 4.3	7.5 ± 7.5	8.8 ± 9.1	7.5 ± 11.5	8.2 ± 12.9	8.9 ± 10.4	10.2 ± 10.6	11.5 ± 10.1	10 ± 0
	Al (tot) Max.	2.7	1.5	4.9	10.7	12.7	13.8	16.7	14.9	16.5	16.1	10
5.5	Al (tot) Min.	2.7	1.5	0.6	3.2	3.6	2.3	3.8	4.5	5.9	6	10
	Al (tot) range	0	0	4.3	7.5	9.1	11.5	12.9	10.4	10.6	10.1	0
	observations	4	5	14	31	32	40	76	47	35	17	6
	Al (tot)	0.8 ± 0.9	1.5 ± 1.8	2.3 ± 5.9	4.5 ± 9.3	5.8 ± 17	5.6 ± 20.9	7.2 ± 13	8.6 ± 12.2	10.8 ± 16.9	6.8 ± 11.5	8.9 ± 14.1
	Al (tot) Max.	1.3	2.4	6.5	9.9	18.6	21.4	15.2	15.2	22.1	11.6	16.6
6	Al (tot) Min.	0.4	0.6	0.6	0.6	1.6	0.5	2.2	3	5.2	0.1	2.5
	Al (tot) range	0.9	1.8	5.9	9.3	17	20.9	13	12.2	16.9	11.5	14.1
	observations	6	22	47	56	74	125	98	80	49	27	13
Total	Al (tot)	0.5 ± 7	8.2 ± 1363	1.2 ± 10.4	1.8 ± 11.6	3.1 ± 41.6	4.2 ± 21.4	6.1 ± 42.3	7 ± 33.7	8.2 ± 22	7.7 ± 40.4	7 ± 23.3
Total	Al (tot) Max.	7	1363.1	10.5	11.6	41.6	21.4	42.3	33.8	22.1	40.4	23.3
Total	Al (tot) Min.	0	0.1	0.1	0	0	0	0	0.1	0.1	0	0
Total	range	7	1363	10.4	11.6	41.6	21.4	42.3	33.7	22	40.4	23.3
Total	observations	160	433	571	790	767	640	468	348	251	148	86

Table 7 (continued)

pH class	TOC class [ppm]	0	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25
	Al (tot)	0.5 ± 0.7	0.9 ± 2.7	1.4 ± 5.2	2.2 ± 9.7	3.8 ± 41.5	4.2 ± 13.9	5.7 ± 42	5.9 ± 19.7	6.1 ± 14.4	10 ± 38.4	6.7 ± 11
	Al (tot) Max.	0.9	2.8	5.3	9.8	41.6	14.3	42.3	20	15.8	40.4	13.8
6.5	Al (tot) Min.	0.2	0.1	0.1	0.1	0.1	0.4	0.3	0.3	1.4	2	2.8
	Al (tot) range	0.7	2.7	5.2	9.7	41.5	13.9	42	19.7	14.4	38.4	11
	observations	29	102	184	279	362	251	140	83	41	28	13
	Al (tot)	0.6 ± 6.9	0.6 ± 3.5	0.9 ± 9.4	1.3 ± 8.4	1.6 ± 6.1	2.3 ± 9.5	3.4 ± 15.2	5 ± 33.7	2.2 ± 4	2 ± 4.4	3.4 ± 9.6
	Al (tot) Max.	7	3.6	9.5	8.5	6.2	9.6	15.4	33.8	4.6	5	10.2
7	Al (tot) Min.	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.6	0.6	0.6
	Al (tot) range	6.9	3.5	9.4	8.4	6.1	9.5	15.2	33.7	4	4.4	9.6
	observations	61	203	239	302	196	140	74	36	20	15	6
	Al (tot)	0.3 ± 0.5	0.4 ± 1.2	0.6 ± 7.1	0.9 ± 5.3	1.1 ± 6.8	0.7 ± 2.4	0.5 ± 1.1	0.8 ± 2.1	0.8 ± 2.2	2.4 ± 4.5	0.8 ± 1.1
	Al (tot) Max.	0.6	1.3	7.2	5.4	6.9	2.5	1.2	2.2	2.3	4.8	1.3
7.5	Al (tot) Min.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2
	Al (tot) range	0.5	1.2	7.1	5.3	6.8	2.4	1.1	2.1	2.2	4.5	1.1
	observations	55	90	60	78	54	33	20	16	17	9	8
	Al (tot)	0.1 ± 0.1	0.2 ± 0.1	0.2 ± 0.4	0.7 ± 2.4	0.7 ± 3	0.7 ± 1	2.5 ± 1	0.5 ± 0.4	4.1 ± 0	0 ± 0	0.2 ± 0
	Al (tot) Max.	0.2	0.2	0.5	2.5	3.1	1.3	3	0.7	4.1	0	0.2
8	Al (tot) Min.	0.1	0.1	0.1	0.1	0.1	0.3	2	0.3	4.1	0	0.2
	Al (tot) range	0.1	0.1	0.4	2.4	3	1	1	0.4	0	0	0
	observations	5	6	18	25	21	10	6	6	2	1	1
	Al (tot)	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0
	Al (tot) Max.	0	0	0	0	0	0	0	0	0	0	0
8.5	Al (tot) Min.	0	0	0	0	0	0	0	0	0	0	0
	Al (tot) range	0	0	0	0	0	0	0	0	0	0	0
	observations	0	1	0	0	0	1	0	0	0	0	0
Total	Al (tot)	0.5 ± 7	8.2 ± 1363	1.2 ± 10.4	1.8 ± 11.6	3.1 ± 41.6	4.2 ± 21.4	6.1 ± 42.3	7 ± 33.7	8.2 ± 22	7.7 ± 40.4	7 ± 23.3
Total	Al (tot) Max.	7	1363.1	10.5	11.6	41.6	21.4	42.3	33.8	22.1	40.4	23.3
Total	Al (tot) Min.	0	0.1	0.1	0	0	0	0	0.1	0.1	0	0
Total	range	7	1363	10.4	11.6	41.6	21.4	42.3	33.7	22	40.4	23.3
Total	observations	160	433	571	790	767	640	468	348	251	148	86

Table 7 (continued)

pH class	TOC class [ppm]	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	Totals
	Al (tot)	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	1363.1 ± 0
	Al (tot) Max.	0	0	0	0	0	0	0	0	0	0	1363.1
3	Al (tot) Min.	0	0	0	0	0	0	0	0	0	0	1363.1
	Al (tot) range	0	0	0	0	0	0	0	0	0	0	0
	observations	0	0	0	0	0	0	0	0	0	0	1
	Al (tot)	10 ± 15.3	7.4 ± 12.5	13.6 ± 11.8	8.7 ± 0	10.8 ± 3.9	13.1 ± 0	10.4 ± 0	8.7 ± 9	6 ± 7.7	7.1 ± 7	9 ± 22.1
	Al (tot) Max.	17.4	14.9	18.6	8.7	12.8	13.1	10.4	11.8	11	10.6	22.1
4	Al (tot) Min.	2.1	2.4	6.8	8.7	8.9	13.1	10.4	2.8	3.3	3.6	0
	Al (tot) range	15.3	12.5	11.8	0	3.9	0	0	9	7.7	7	22.1
	observations	9	13	10	5	3	3	3	3	7	3	76
	Al (tot)	6.3 ± 16.8	13.3 ± 0	17.2 ± 0	4.7 ± 0	13.8 ± 0	0 ± 0	0 ± 0	11.1 ± 14.5	0 ± 0	0 ± 0	8 ± 19.8
	Al (tot) Max.	19.5	13.3	17.2	4.7	13.8	0	0	18.4	0	0	20.6
4.5	Al (tot) Min.	2.7	13.3	17.2	4.7	13.8	0	0	3.9	0	0	0.8
	Al (tot) range	16.8	0	0	0	0	0	0	14.5	0	0	19.8
	observations	13	2	3	5	3	1	1	2	0	0	164
	Al (tot)	15.5 ± 7.9	12.5 ± 0	9.2 ± 12	28.6 ± 0	14.5 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	9.7 ± 28.6
	Al (tot) Max.	20.3	12.5	16	28.6	14.5	0	0	0	0	0	28.6
5	Al (tot) Min.	12.4	12.5	4	28.6	14.5	0	0	0	0	0	0
	Al (tot) range	7.9	0	12	0	0	0	0	0	0	0	28.6
	observations	10	3	7	3	8	1	1	0	0	0	292
	Al (tot)	17.9 ± 0	14.1 ± 0	3.6 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	8.5 ± 17.9
	Al (tot) Max.	17.9	14.1	3.6	0	0	0	0	0	0	0	17.9
5.5	Al (tot) Min.	17.9	14.1	3.6	0	0	0	0	0	0	0	0
	Al (tot) range	0	0	0	0	0	0	0	0	0	0	17.9
	observations	5	1	2	3	1	2	1	0	0	0	322
	Al (tot)	2.1 ± 0	14.9 ± 0	14.5 ± 0	0 ± 0	0 ± 0	0 ± 0	11.8 ± 0	0 ± 0	0 ± 0	0 ± 0	6.5 ± 22
	Al (tot) Max.	2.1	14.9	14.5	0	0	0	11.8	0	0	0	22.1
6	Al (tot) Min.	2.1	14.9	14.5	0	0	0	11.8	0	0	0	0.1
	Al (tot) range	0	0	0	0	0	0	0	0	0	0	22
	observations	5	3	1	0	0	1	1	1	0	0	609
Total	Al (tot)	7.5 ± 20.3	8 ± 14.9	9.4 ± 18	11.6 ± 28.6	12.5 ± 5.6	9.4 ± 16.4	8.4 ± 11.8	8.2 ± 17.4	6 ± 7.7	4.5 ± 10.2	4.4 ± 1363.1
Total	Al (tot) Max.	20.3	14.9	18.6	28.6	14.5	16.4	11.8	18.4	11	10.6	1363.1
Total	Al (tot) Min.	0	0	0.6	0	8.9	0	0	1	3.3	0.4	0
Total	range	20.3	14.9	18	28.6	5.6	16.4	11.8	17.4	7.7	10.2	1363.1
Total	observations	61	36	31	19	17	13	8	7	8	6	4868

Table 7 (continued)

pH class	TOC class [ppm]	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	Totals
	Al (tot)	7.9 ± 14.5	7.6 ± 7.6	8.4 ± 5.6	9.4 ± 3.8	0 ± 0	10 ± 10.6	0 ± 0	0 ± 0	0 ± 0	2 ± 3.2	3.6 ± 42.2
	Al (tot) Max.	15.6	11.4	11.2	11.3	0	16.4	0	0	0	3.6	42.3
6.5	Al (tot) Min.	1.1	3.8	5.6	7.5	0	5.8	0	0	0	0.4	0.1
	Al (tot) range	14.5	7.6	5.6	3.8	0	10.6	0	0	0	3.2	42.2
	observations	8	6	3	2	1	3	0	0	0	2	1537
	Al (tot)	0 ± 0	13.4 ± 0	6.4 ± 3	0 ± 0	0 ± 0	11.5 ± 0	2.9 ± 0	0 ± 0	0 ± 0	0 ± 0	1.5 ± 33.7
	Al (tot) Max.	0	13.4	7.5	0	0	11.5	2.9	0	0	0	33.8
7	Al (tot) Min.	0	13.4	4.5	0	0	11.5	2.9	0	0	0	0.1
	Al (tot) range	0	0	3	0	0	0	0	0	0	0	33.7
	observations	1	4	3	0	1	1	1	0	1	1	1305
	Al (tot)	1.5 ± 2.6	2.2 ± 2.7	1.3 ± 1.4	0 ± 0	0 ± 0	1.6 ± 0	0 ± 0	1 ± 0	0 ± 0	0 ± 0	0.8 ± 7.1
	Al (tot) Max.	2.7	3.8	2	0	0	1.6	0	1	0	0	7.2
7.5	Al (tot) Min.	0.1	1.1	0.6	0	0	1.6	0	1	0	0	0.1
	Al (tot) range	2.6	2.7	1.4	0	0	0	0	0	0	0	7.1
	observations	8	4	2	1	0	1	0	1	0	0	457
	Al (tot)	0.4 ± 0.4	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0.6 ± 4
	Al (tot) Max.	0.6	0	0	0	0	0	0	0	0	0	4.1
8	Al (tot) Min.	0.2	0	0	0	0	0	0	0	0	0	0.1
	Al (tot) range	0.4	0	0	0	0	0	0	0	0	0	4
	observations	2	0	0	0	0	0	0	0	0	0	103
	Al (tot)	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0	0 ± 0
	Al (tot) Max.	0	0	0	0	0	0	0	0	0	0	0
8.5	Al (tot) Min.	0	0	0	0	0	0	0	0	0	0	0
	Al (tot) range	0	0	0	0	0	0	0	0	0	0	0
	observations	0	0	0	0	0	0	0	0	0	0	2
Total	Al (tot)	7.5 ± 20.3	8 ± 14.9	9.4 ± 18	11.6 ± 28.6	12.5 ± 5.6	9.4 ± 16.4	8.4 ± 11.8	8.2 ± 17.4	6 ± 7.7	4.5 ± 10.2	4.4 ± 1363.1
Total	Al (tot) Max.	20.3	14.9	18.6	28.6	14.5	16.4	11.8	18.4	11	10.6	1363.1
Total	Al (tot) Min.	0	0	0.6	0	8.9	0	0	1	3.3	0.4	0
Total	range	20.3	14.9	18	28.6	5.6	16.4	11.8	17.4	7.7	10.2	1363.1
Total	observations	61	36	31	19	17	13	8	7	8	6	4868

Table 8

```
TITLE pH equilibrium calculation for triprotic organic acid model with
#  an Al org complexation term DRISCOLL et al 1994

SOLUTION_MASTER_SPECIES
#element_name  master_species   alk     gfw_formula      element_gfw
Sweden            SwedenH3       0       1089.06         1089.06
Czech             CzechH3        0       1089.06         1089.06
Driscoll          DriscollH3     0       1089.06         1089.06
SOLUTION_SPECIES
SwedenH3 = SwedenH3
        log_k   0
        delta_h 0       kcal
# definition of two different triprotic acids
SwedenH3  = SwedenH2-  + H+
         log_k   -3.04
SwedenH2- = SwedenH-2  + H+
         log_k   -4.51
SwedenH-2  = Sweden-3  + H+
         log_k   -6.46
CzechH3 = CzechH3
        log_k   0
        delta_h 0       kcal
CzechH3  = CzechH2-  + H+
         log_k   -2.5
CzechH2- = CzechH-2  + H+
         log_k   -4.42
CzechH-2  = Czech-3  + H+
         log_k   -6.7
DriscollH3 = DriscollH3
        log_k   0
        delta_h 0       kcal
# Driscoll et al. 1994
# 10 mg/l equals 0.0000458 moles   4.58 umol charge per g
DriscollH3  = DriscollH2-  + H+
         log_k   -2.64
# Driscoll et al. 1994
DriscollH2- = DriscollH-2  + H+
         log_k   -5.66
# Driscoll et al. 1994
DriscollH-2  = Driscoll-3  + H+
         log_k   -5.94
# Driscoll et al. 1994
Al+3 + Driscoll-3 = AlDriscoll
        log_k   8.38
# Driscoll et al. 1994
Al+3 + Driscoll-3  + H+ = AlHDriscoll+
        log_k   13.1
# Driscoll et al. 1994
SOLUTION 1
        units  moles/l
        pH  3.50   charge
        Na  0.000020
#       Al   0.00002
        Cl   0.000335
#  was  Cl   0.000265
#       Driscoll 0.000275
#       that is 20 mg/l DOC
EQUILIBRIUM_PHASES
        CO2(g)          -3.458
#       was             -3.50
```

```
# solution in equilibrium with athmospheric pressure
SELECTED_OUTPUT
        -file ORG_SW.sel
        -activities H+  OH- Al+3
        -molalities SwedenH3  Sweden-3
        -totals Al  Sweden
        -si Gibbsite(A)  CO2(g)
END
INCREMENTAL_REACTIONS false
Use solution 1
Use equilibrium phases 1
REACTION 1
        Sweden   1.0
        .0000085 in 50 steps
# titrating 0.000275 moles of Driscoll DOC in 1 l of solution 1
# added in 50 increment steps
Save solution 1
End
use solution 1
Use equilibrium phases 1
REACTION 2
      NaOH   1.0
      0.000482 in 500 steps
end
```

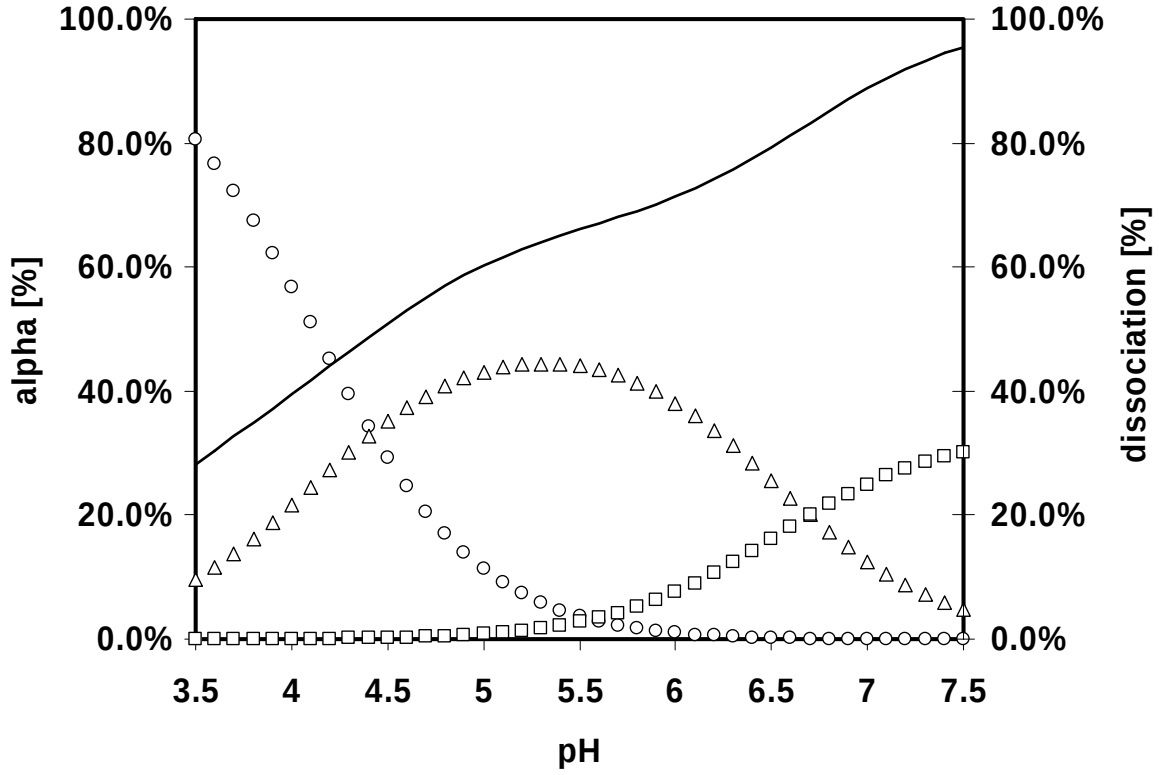

Figure 1 : Apparent dissociation of the Swedish 3-pKa triprotic acid analogue model. Bold line dissociation of apparent charge as a function of pH y-axis to the right. Degree of distribution y-axis to the left (c.f. eq 14) :$\alpha 1$ (circles), $\alpha 2$ (triangles) $\alpha 3$ (squares).

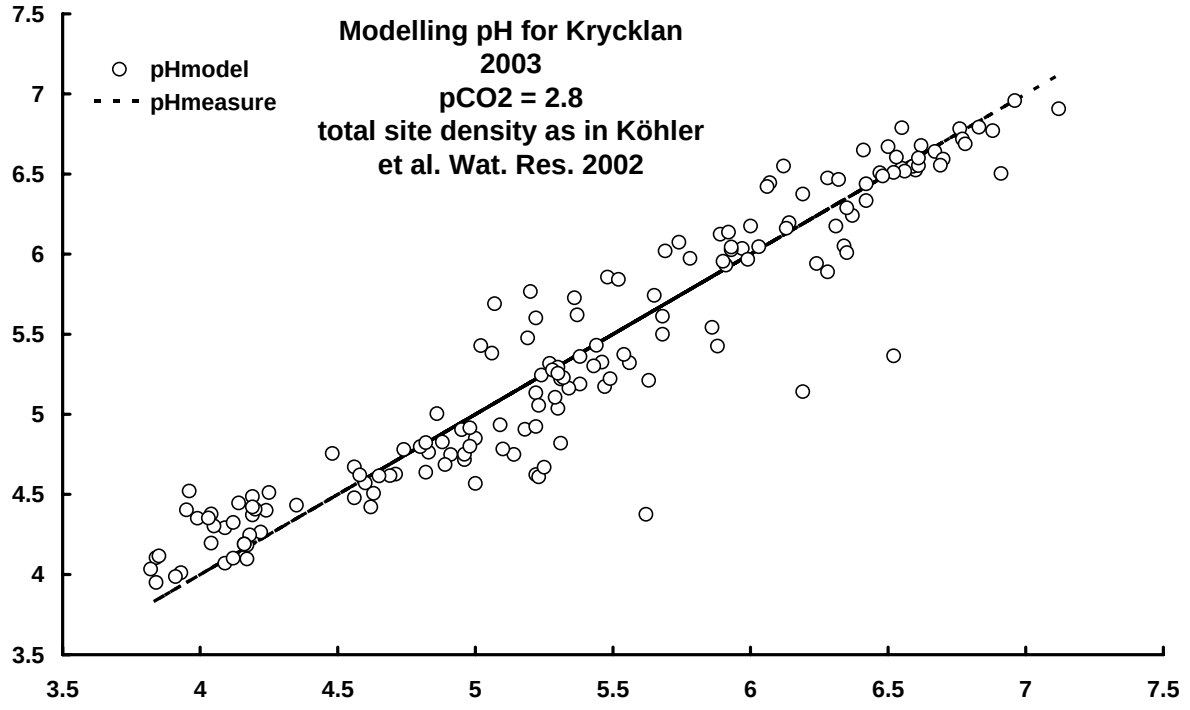

Figure 2 : Comparison between modelled and measured pH using WHAM for the Krycklan data set.

Average aluminium-pH relationships in the various datasets.

Black diamonds total (♦) aluminium concentration, white squares (☐) organically bound aluminium. Error bars correspond to the standard deviation within each class.

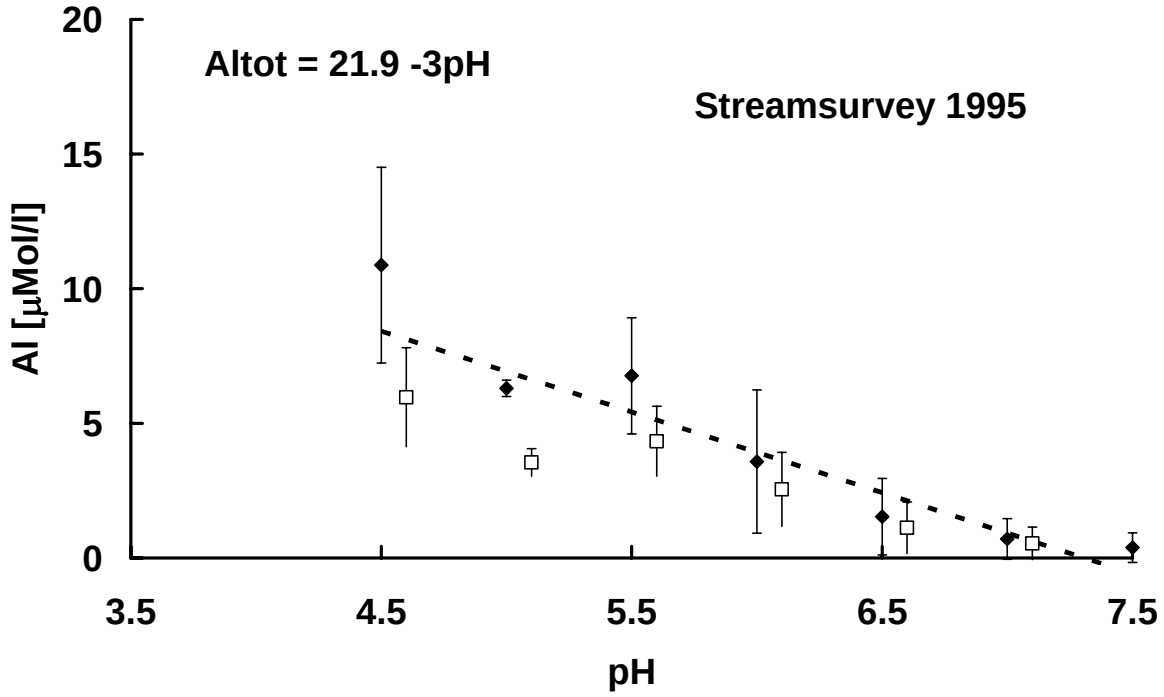

Figure 3: Average Al-pH relationship for the 1995 stream survey

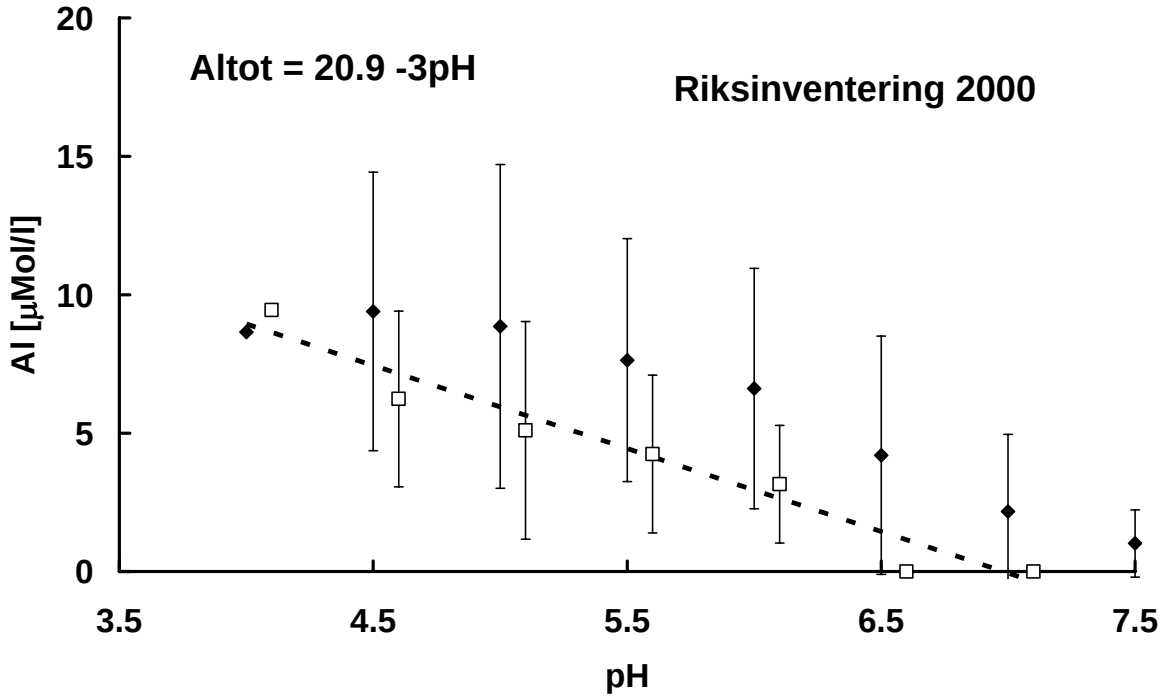

Figure 4: Average Al-pH relationship for the 2000 lake survey

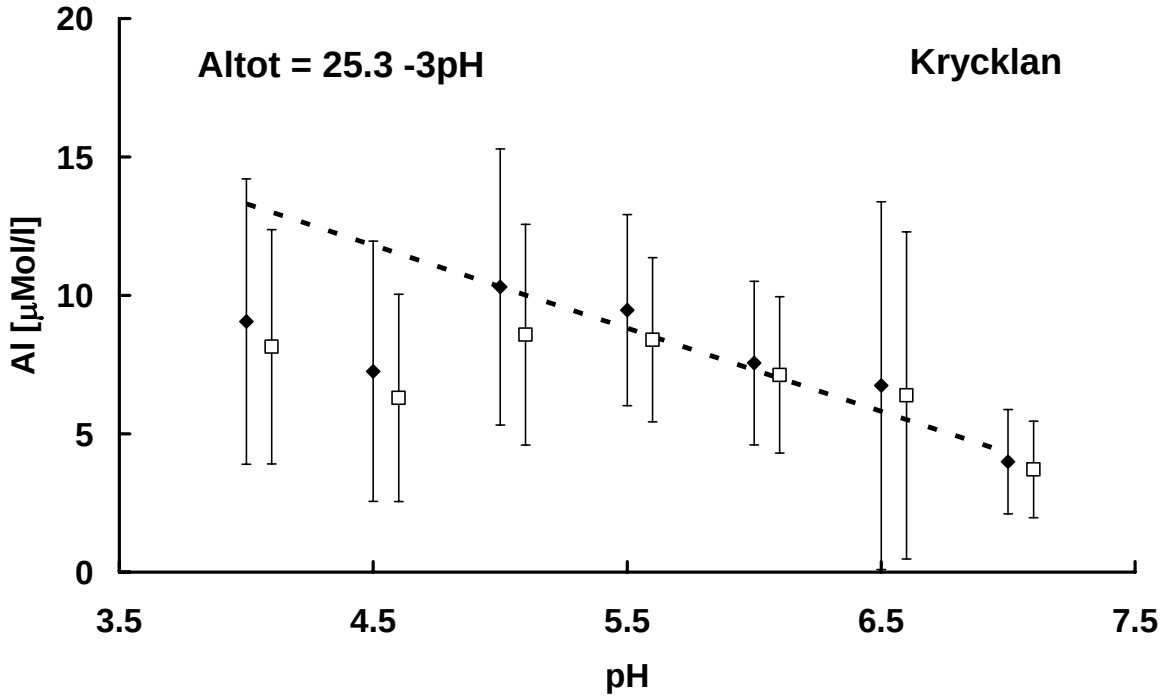

Figure 5: Average Al-pH relationship for the Krycklan data set.

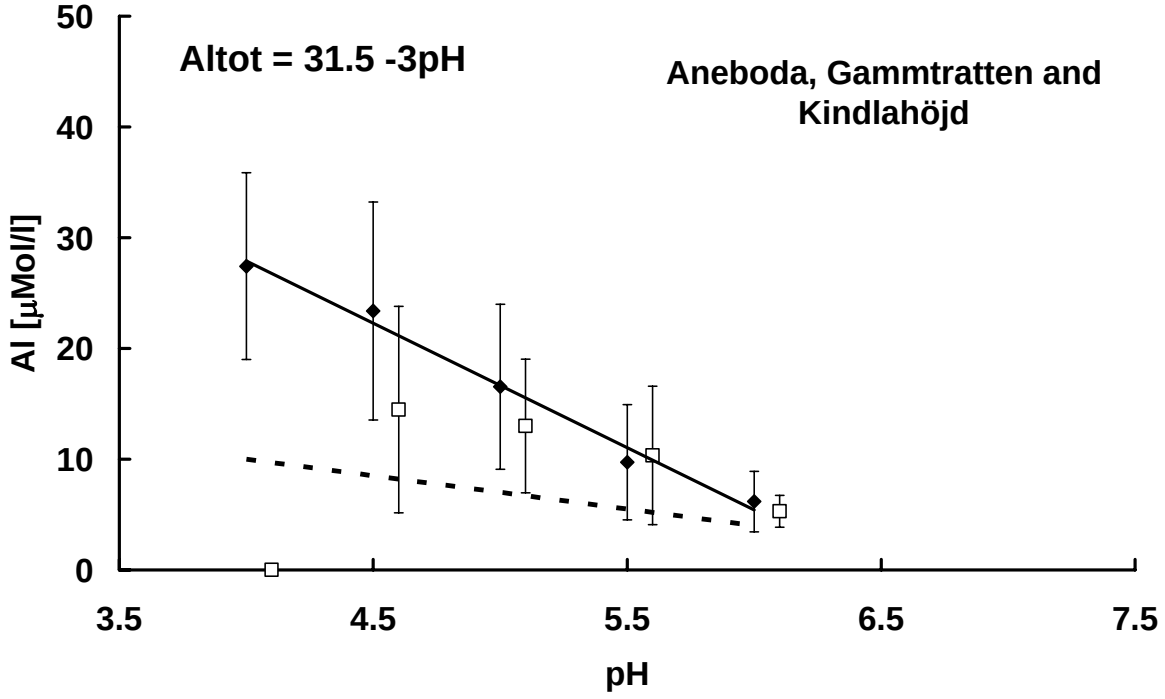

Figure 6: Average Al-pH relationship for the Kindlahöjd, Gammtratten and Aneboda data set.