



## Total Organic Carbon (TOC) Measurement of MDL by TRLI-OnlineTOC2000

### 1. Introduction

In this study, the TRLI-OnlineTOC2000 analyzer was tested to analyze up to 2000 ppm. TRLI-OnlineTOC2000 operating performance at 0-2000 ppm is a very important data. Details on the repeatability of the assay are presented below.

**Sample Description: Synthetic Sample (with KHP) - Liquid**

### 2. Experimental Conditions

Synthetic water samples carrying about 20 ppm TOC are prepared to check performance of TRLI-OnlineTOC2000.

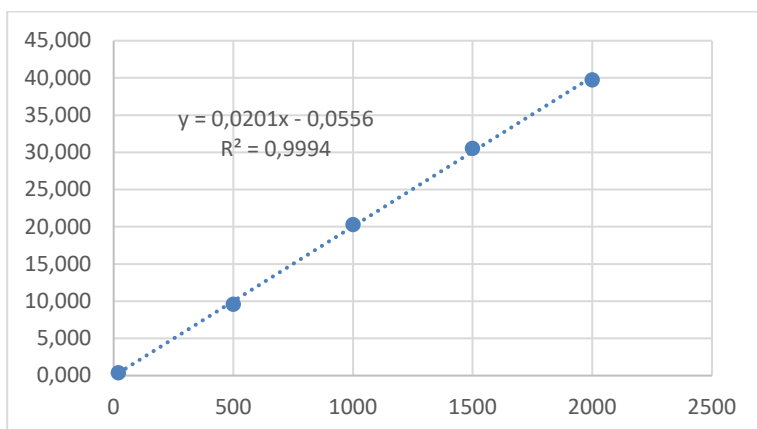
Parametre	Value
Decomposition Zone Temp.	900 °C
Catalytic Zone Temp.	750 °C
Air Pressure	1.5 bar
Carrier Gas Flow Rate	250 mL/min

### 3. Calibration

Calibration is done according to the solution having below specification and calibration curve is represented. Calibration was made with 5 points with 20-500-1000-1500 and 2000 ppm.

Standart Name	Standart Concentration
KHP	2000 ppm

Calibration Equation (TC)	R <sup>2</sup>
$y = 0.0201x - 0.0556$	0.9994





#### 4. Results

The results of the validation study are given below.

Table 1: 20 ppm Validation Results				
Repeat Number	Sample Size (mL)	TOC Result (ppm)	TOC Average (ppm)	RSD (%)
1	0.5	20.85	20.94	1.06
2	0.5	21.24		
3	0.5	21.04		
4	0.5	20.65		

#### 5. Conclusion

In this study, a method study was carried out with KHP solution in the range of 0-2000 ppm and a linear calibration was obtained. As seen in the table above, validation studies carried out with 20 ppm a high repeatability was achieved at 20 ppm with the TRL-OnlineTOC2000 analyzer.