

# TOC Determination

MERCK

## Determination of TOC

### Definition:

$$\begin{array}{l} \text{TOC} \\ \text{Total Organic Carbon} \\ \text{(e. g.: C from proteine or alcohol)} \end{array} = \begin{array}{l} \text{TC} \\ \text{Total Carbon} \end{array} - \begin{array}{l} \text{TIC} \\ \text{Total Inorganic Carbon} \\ \text{(e. g.: C from carbonate)} \end{array}$$

### Chemical Reactions:

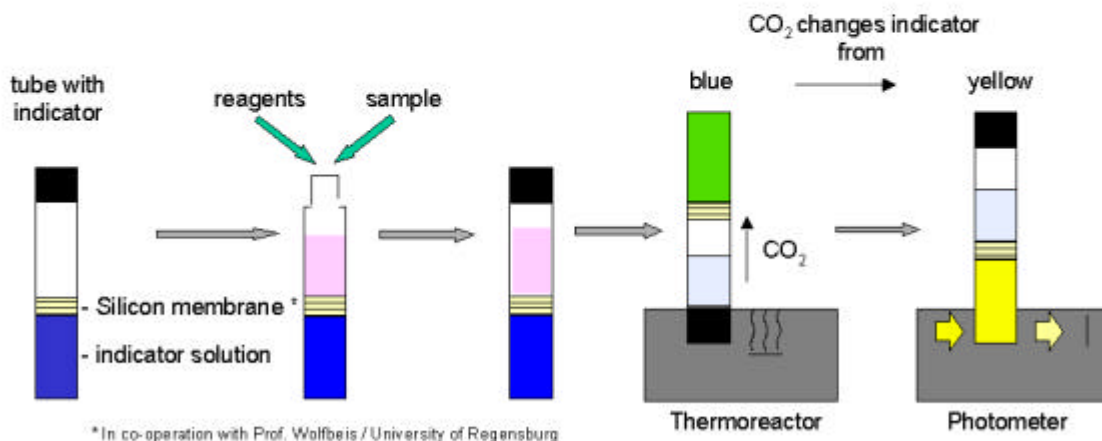


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- Remove inorganic carbon by stirring the sample on a stirrer vigorously.
- Add stirred sample and the digestion reagent into the TOC tube



## Advantages of TOC Cell Test

- Easy to handle test procedure by „**Single Tube**“ technology
- high accurate test results by preventing CO<sub>2</sub> contamination from air

## Applications for TOC Cell Test

- 5 - 80 mg/l TOC for drinking water (= ~ 1.5 - 24 mg/l COD)
  - » more sensitive for measuring the low level of organic contamination
- 50 - 800 mg/l TOC for waste water
- Alternative to COD: **TOC** test works **without mercury**
  - » more environmental friendly as less problems with waste