

## <sup>14</sup>C – DIC Sampling for measurement by LSC



**For each sample 1-4 x 60 L barrel (or any other big barrel  
or container), depending on DIC content**

Nach § 15 Abs. 4 TrinkwV 2001 zugelassene  
Trinkwasseruntersuchungsstelle

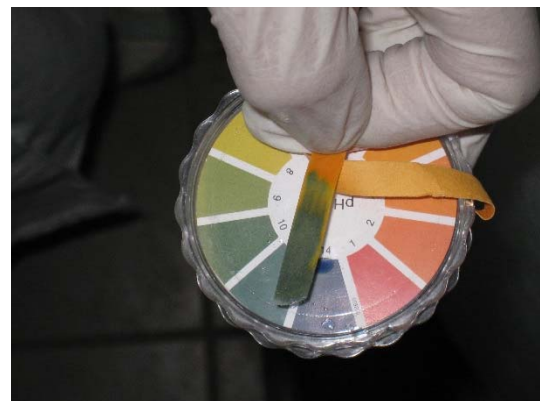
<b>Sample volume:</b>	1 x 60 L	HCO <sub>3</sub> > 5mmol/L
	2 x 60 L	5 mmol/L > HCO <sub>3</sub> > 2.5 mmol/L
	3 x 60 L	HCO <sub>3</sub> < 2.5mmol/L
	4 x 60 L	HCO <sub>3</sub> < 1.0mmol/L

1. Rinse the 60 L barrel.
2. Fill the barrel to overflowing capacity, the pipe should go to the bottom of the barrel.
3. Take about 1 L water from the container
4. Add sodium hydroxide (NaOH, carbonate-free and 50%), pH should be >9.  
(1 x 50ml for DIC < 5mmol/L, otherwise more).
5. Add barium chloride (BaCl<sub>2</sub>)  
(about 100 g, if SO<sub>4</sub> < 300mg/L, otherwise 2 x 100 g).
6. Close the barrel, write inscription with name, date and addition of chemicals
7. Put the barrel on one side and roll until everything is well mixed.
8. Aufkleber beschriften mit „Bezeichnung“ und „Datum“ und auf 60 L Behälter kleben.
9. Organize transport of the barrels to the lab.

**Attention:** For high gaseous CO<sub>2</sub> contents, you need to add the sodium hydroxide (NaOH) to the barrel before filling.

**Attention:** NaOH is toxic and caustic!

## $^{14}\text{C}$ – Sampling



pH should be  $> 9$ , otherwise add another 50 ml NaOH

## **$^{14}\text{C}$ – DIC and $\delta^{13}\text{C}$ -DIC – Sampling for measurement by AMS and IRMS**

**For each sample 1 x 1 L PE bottle, for low DIC content please take 2 L bottle**

1. Fill 1 L PE bottle.
2. Add NaOH<sup>\*)</sup> to bottle (preferable before sampling), check if pH >12, otherwise add NaOH.
3. Make inscription with identification and date. Note the addition of NaOH. Note in case the water smells of H<sub>2</sub>S.
4. Transport to the laboratory.

<sup>\*)</sup> NaOH should be carbonate-free, alkaline solution 50%

**Attention: NaOH is toxic and caustic**