

PREPARATION OF CALCIUM BICARBONATE USING MINERAL WATER

Chemicals

- Mineral water containing Carbonic Acid (with gass)
- Calcium Carbonate powder

Materials and equipment

- Laboratory balance
- Spatula
- 100 ml glass beaker
- 500 ml glass beaker
- Glass rod
- Label



Procedure

• Weighing the Calcium Carbonate

- Take the 100 ml glass beaker as weighing vessel
- Check if the balance pan is clean and dry
- Place the beaker on the laboratory balance
- Tare the balance
- Take some Calcium carbonate powder from the original chemical container with a spatula
- Add little by little to the beaker until 1.1 g is reached (1.1 g for 1 Liter, 1.65 g for a 1.5 Liter bottle)

• Dissolving of the Calcium Carbonate in the mineral water

- Pour about 400 ml of the mineral water into the 500 ml glass beaker
- Add some of the mineral water to the Calcium Carbonate Powder
- Mix by stirring with the glass rod,
- Pour the Calcium Carbonate suspension into the bottle of mineral water
- Clean the 100 ml glass beaker by adding some mineral water from the 500 ml glass beaker, sweeping around and pouring this into the bottle of mineral water, repeat until no Calcium Carbonate is left
- Pour the remaining mineral water from the 500 ml beaker back into the bottle of mineral water
- Close the bottle quickly
- Label the bottle (Calcium Bicarbonate, date)

• Storage in the fridge to promote dissolution

- Put the closed bottle into the fridge at least over 1 night, since low temperatures promote the formation of Calcium Bicarbonate
- Turn the bottle regularly to promote dissolving of the Calcium Carbonate

• Clean all equipment

- Clean up the balance and the area around the balance
- Rinse the beakers and the glass rod with demineralised water

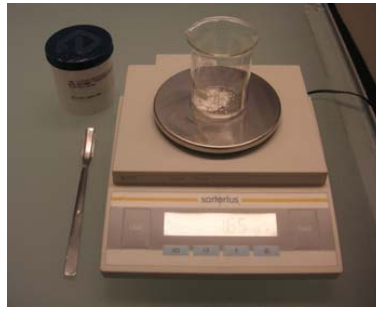
• Transfer of the solution into treatment tray

- Pour the Calcium Bicarbonate into the treatment tray, but keep a residue of some of the solution within the bottle to prevent

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Necessary equipment



Weigh calcium carbonate in a 100 ml glass beaker



Pour mineral water into a 500 ml glass beaker



Add some of the mineral water to the Calcium Carbonate powder



Mix with a glass rod



Gently sway the suspension and pour it the bottle of mineral water



To clean, add some water from the 500 ml beaker into the 100 ml beaker, sway



Pour the diluted content of the 100 ml beaker into the bottle of mineral water. Repeat until no Calcium carbonate residues remain



Add the remaining mineral water back into the bottle, close and label the bottle



Put the bottle in the fridge at least for a night, shake from time to time, after one night the solution is ready



Pour the calcium bicarbonate into the treatment tray, keep some residue in the bottle



Do not use the residue to prevent precipitation of white deposits on the surface of the artefact

Birgit Reissland (Netherlands Institute for Cultural Heritage, Amsterdam)

Karin Scheper (University Library Leiden)

Sabine Fleischer (Broekens & Fleischer – Studio for Book and Paperconservation, Nijmegen)

The authors can not be held responsible for any damage caused by the application of the above-described method.

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