

NR 1851

Date: 27-okt-10

# Application Data Sheet

## Hardness, Calcium & Magnesium

**Matrix**

Deionized water and Brine

**Principle**

In alkaline environment Calver-B reacts with calcium (and magnesium) ions to form a red complex. By adding EDTA this complex is destroyed and the Calver-B turns to a blue colour. The difference in the colour intensity is a measure for the amount of calcium present in the sample.

**Detection method**

Method:	Detector	Ion:	λ:
Ca2+ Colorimetry - VIS	Cuvette Module		620 nm

**Specification**

Range	Standard Dev.	Repeatability	Inaccuracy	Analysis time
Ca2+ 0 - 100 µg/l	1.0 µg/l or 1%	3 µg/l or 3%	5 µg/l or 5%	10 minutes

( If 2 options : whichever is larger )

**Interferences**

Chlorine (Hypochlorous acid)

**Reagents**

Reagent 1	0.5 ml per analysis
Reagent 2	0.8 ml per analysis
Reagent 3	0.6 ml per analysis

**Procedure**

- Clean cuvette
- Take sample
- Add reagent 1
- Add reagent 2
- Measure initial color
- Add reagent 3
- Measure final color
- Calculate result

**Remarks**

Use cuvette module with LED white + filter 620 nm

**Possible Analyzer**

**Typical Wet Part layout**

- 2045TI
- 2045VA
- 2040
- 2016
- 2018 HD
- 2019 HD
- 2019 Special
- 2019 Digest
- 2003 Alert
- 2004 Alert

