

## Application Notes: Reflectometry – pH in Soil Samples

### Reflectometric determination after reaction

#### Reagents

Catalog No. 116996 **Reflectoquant® pH Test (pH 4.0 – 9.0)**

Catalog No. 117246 **Reflectometer RQflex® 20**

Catalog No. 102382 **Calcium chloride dihydrate**

This application note pertains to RQflex®20 and all discontinued instruments (RQflex® 10, RQflex® plus)

#### Sample preparation

Homogenize 10 g (exactly weighed) of soil sample with 25 ml of 0.0125 M CaCl<sub>2</sub> solution by shaking for 15 minutes.



RQflex® 20 Reflectoquant®

#### Analysis

Place the test strip in the soil suspension for 10 minutes, ensuring that both reaction zones are immersed. Then remove the strip from the suspension and quickly rinse the reaction zones with distilled water to remove particles.

Allow excess liquid to run off via the long edge of the strip on to an absorbent paper towel.

Press the reflectometer START key and insert test strip into the strip adapter, then press START key anew. After 10 seconds the strip is measured in the reflectometer. The value will be stored automatically (Please refer to the RQflex® operating instructions and the package insert of the Reflectoquant® pH Test).

#### NB

The result shown on the display is the final result; it is not allowed to use any dilution factor.

#### Results - comparison with pH electrode (LUFA method):

Sample	Reflectoquant®	pH electrode
1	6.9	7.0
2	5.9	6.1
3	6.7	6.7
4	5.4	5.7
5	6.1	6.1
6	5.5	5.7
7	6.2	6.1
8	6.4	6.5
9	5.5	5.6
10	6.5	6.5

### Materials

Product #	Description
1.02382	Calcium chloride dihydrate for analysis EMSURE® ACS, Reag. Ph Eur for analysis EMSURE® ACS, Reag. Ph Eur
1.16996	pH Test Method: reflectometric with test strips pH 4.0 - 9.0 Reflectoquant®
1.17246	Reflectometer