



## NITRATE ION CONCENTRATION

In some instances, after a potential producing horizon is drilled, it is desirable to know how much drilling mud filtrate has permeated the zone. In order to differentiate drilling mud filtrate from formation water a “tracer” is often introduced into the drilling mud. The nitrate ion is often used as such a tracer.

Equipment		Product Code
1.	Hach Model NI-11 nitrate test kit, 0 - 50 mg/L	EX1070

### TEST PROCEDURE

To obtain accurate test results please read carefully before proceeding:

Samples containing above 50 mg/L nitrate nitrogen can be tested by diluting the sample before running the test. For example, a one to five dilution can be made by using one mL of the water to be tested and four mL of demineralised water. Use the calibrated dropper provided in this kit for the dilution. Demineralised water is not included in this kit but may be ordered from Di-Corp. The results of a one to five dilution are multiplied by five to obtain the correct mg/l nitrate nitrogen. The results of other dilutions will follow the same procedure as above; for example, the results of a one to three dilution would be multiplied by three.

A small portion of the nitrate reagent will remain undissolved and fall to the bottom of the color viewing tube. This will not affect test results but should be rinsed from the tube between tests.

**WARNING:** The reagents in this kit may be hazardous to the health and safety of the user if inappropriately handled. Please read all warnings before performing the test and use appropriate safety equipment.

1. Rinse a color viewing tube several times with the water to be tested; then fill to the 5mL mark.
2. Use the clippers to open one Nitrate 5 nitrate reagent powder pillow. Add the contents of the pillow to the tube. Stopper the tube and shake vigorously for exactly one minute.
3. An amber color will develop if nitrate is present.
4. Allow the prepared sample to set undisturbed for one minute; then place the tube of prepared sample in the right opening of the comparator.
5. Fill the other viewing tube to the 5mL mark with some of the original water sample and place it in the left opening of the comparator.
6. Hold the comparator up to a light source such as a window, the sky or a lamp and view through the openings in front. Rotate the disc until a color match is obtained. Read the mg/L nitrate nitrogen (N) through the scale window.
7. Test results can be converted from mg/L nitrate nitrogen (N) to mg/L nitrate ( $\text{NO}_3$ ) by multiplying the scale reading by four point four (4.4).