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Special Documentation
CY80NO

Preparing the standard solution
For Liquiline System CA80NO

Use

The standard solution (parent solution) is suitable for preparing standard solutions for
- nitrite determination (NO_2^-)
- nitrite nitrogen determination (NO_2^--N)

Safety instructions

NOTICE

Chemicals can irritate the skin and eyes and cause serious injury!
- ▶ Wear protective goggles, protective gloves and a lab coat when working with chemicals.
- ▶ Avoid any skin contact with chemicals.
- ▶ Comply with instructions in the safety data sheets for the chemicals.

Information regarding the shelf life

Always mix fresh standard solution. Once mixed, standard solutions only have a limited shelf life due to their biological activity.

Ready-to-prepare standard solution (stock solution)	6 months
After preparing the standard solution: ready-to-use standard solution	7 days, non-refrigerated 4 weeks, refrigerated

Materials

Prepare the following materials and tools:
- 1 measuring cylinder, 200 ml (6.76 fl oz), 500 ml (16.9 fl oz) or 1000 ml (33.81 fl oz) (not supplied)
- Pipette, volumetric or continuously adjustable (not supplied)
- Deionized (nitrite-free) water (not supplied), amount depending on the size of the necessary graduated cylinder
- Standard solution (stock solution, 250 mg/l (ppm) NO_2^--N)

Preparing standard solution (stock solution) CY80NO-GG+TV

Base product: standard solution (stock solution)

To avoid any contamination, use clear glass instruments and bottles to prepare the standard solution.

1. Refer to the table for the following: target concentration of the standard solution, stock solution volumes and whether a standard solution for nitrate determination (NO_2^-) or nitrate-nitrogen determination (NO_2^--N) should be prepared.
2. Pipette the volume of stock solution indicated in the following tables into the individual measuring cylinder.
3. Fill the graduated cylinder with deionized (nitrite-free) water up to the mark.
4. Seal the graduated cylinder again with a plug.

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5. Swirl the contents to mix the components.
   ↳ The prepared standard solution is now ready for use.

Keep the standard solution in a cool place away from light.

The standard solution has a maximum shelf life of 4 weeks from the date of mixing.

Calculate the new concentration c:
$c = V_s \cdot c_s / V_p$
V_s ... Collected volume of stock solution [ml]
c_s ... Concentration of stock solution [mg/l]
V_p ... New sample volume [ml]

Stock solution (250 mg/l (ppm) NO_2^--N): Stock solution volume to be pipetted depends on the target concentration and preparation volume

Target concentration				**Graduated cylinder 200 ml (6.76 fl.oz)**	**Graduated cylinder 500 ml (16.9 fl.oz)**	**Graduated cylinder 1000 ml (33.81 fl.oz)**
(µg/l (ppb) NO_2^--N	(mg/l (ppm) NO_2^--N	(µg/l (ppb) NO_2^-)	(mg/l (ppm) NO_2^-)	ml (fl.oz)		
25	0.025	82	0.082	0.02 (0.0007)	0.05 (0.002)	0.1 (0.003)
50	0.050	164	0.164	0.04 (0.001)	0.1 (0.003)	0.2 (0.007)
100	0.100	329	0.329	0.08 (0.003)	0.2 (0.007)	0.4 (0.01)
1000	1.00	3286	3.286	0.8 (0.03)	2 (0.07)	4 (0.13)
2500	2.50	8214	8.214	2 (0.07)	5 (0.17)	10 (0.34)
10000	10.0	32857	32.857	8 (0.27)	20 (0.68)	40 (1.35)