Cadmium M. TT M87

0.025 - 0.75 mg/L Cd

Cadion

Instrumentspecifieke informatie

De test kan op de volgende apparaten worden uitgevoerd. Bovendien worden de vereiste cuvette en het absorptiebereik van de fotometer aangegeven.

Toestellen	Cuvette	λ	Meetbereik
SpectroDirect, XD 7000, XD 7500	ø 16 mm	525 nm	0.025 - 0.75 mg/L Cd

Reagentia

Benodigd materiaal (deels optioneel):

Reagentia	Verpakkings-eenheid	Bestelnr.
Cadmium Spectroquant 1.14834.0001 cuvettest [d)]	25 St.	420750

Toepassingsbereik

- Afvalwaterzuivering
- Behandeling drinkwater
- Zuivering vervuild water
- Galvanisering

Voorbereiding

1. Before performing the test, you must read through the original instructions and safety advice that is delivered with the test kit (MSDS are available on the home-page of www.merckmillipore.com).
2. With the test process described, only Cd^{2+} ions are determined. To determine colloidal, undissolved and complex-bound cadmium, digestion is first required.
3. The pH value of the sample must be between 3 and 11.

Aantekeningen

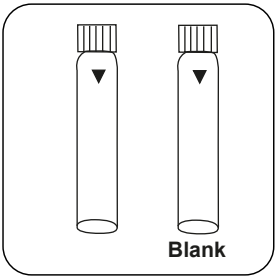
1. This method is adapted from MERCK.
2. Spectroquant® is a registered trademark of the company MERCK KGaA.
3. Appropriate safety precautions and good laboratory technique should be used during the whole procedure.
4. Sample and reagent volumes must be metered using a suitable volumetric pipette (class A).
5. Because the reaction depends on temperature, the sample temperature must be between 10 and 40 °C.
6. The reagents are to be stored in closed containers at a temperature of +15 °C – +25 °C.

Uitvoering van de bepaling Cadmium met MERCK Spectroquant®-cuvettentest, nr. 1.14834.0001

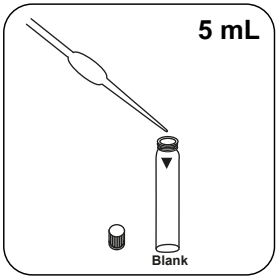
De methode in het apparaat selecteren.

Voor deze methode hoeft niet elke keer een nulmeting uitgevoerd te worden op de volgende apparaten: XD 7500, XD 7500

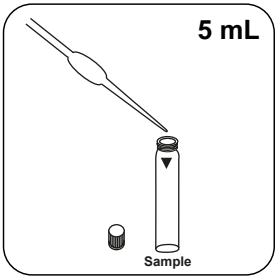
Stappen met nulspoelbakje overslaan.



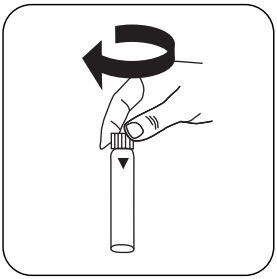
Twee **reagensspoelbakjes** klaarzetten. Een als nulspoelbakje kenmerken.



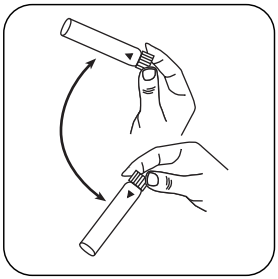
5 mL gedeïoniseerd water in het nulspoelbakje doen.



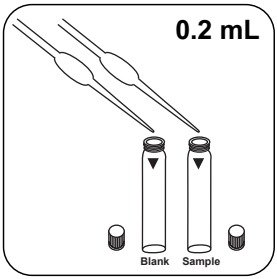
5 mL staal in het staalspoelbakje doen.



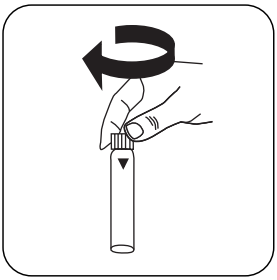
De spoelbakjes afsluiten.



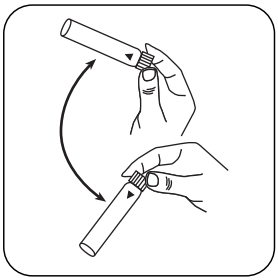
De inhoud mengen door om te draaien.



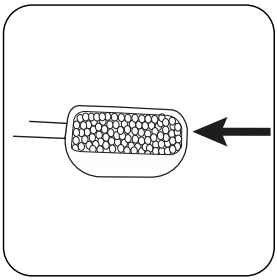
In elk spoelbakje **0.2 mL Reagens Cd-1K oplossing** doen.



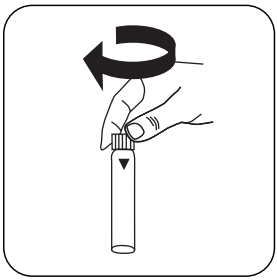
De spoelbakjes afsluiten.



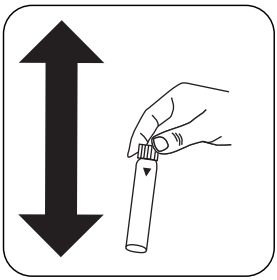
De inhoud mengen door om te draaien.



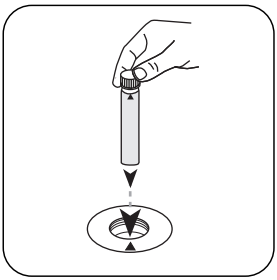
Telkens **een afgestreken microlepel Reagens Cd-2K** toevoegen.



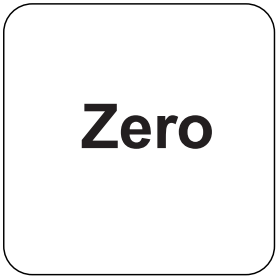
De spoelbakjes afsluiten.



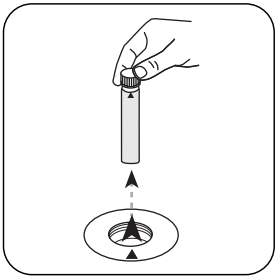
De inhoud oplossen door te schudden.



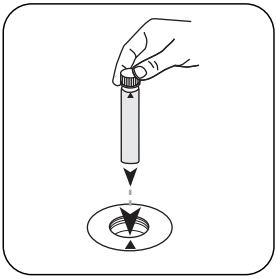
Het **nulspoelbakje** in de meetschacht plaatsen. Op de positionering letten.



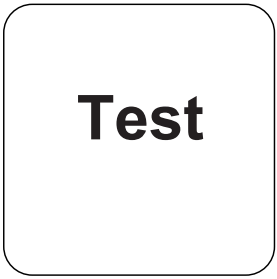
De toets **NUL** indrukken.



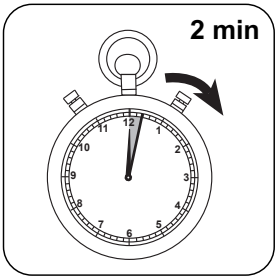
Het **spoelbakje** uit de meetschacht nemen.



Het **staalspoelbakje** in de meetschacht plaatsen. Op de positionering letten.



De toets **TEST** (XD: **START**) indrukken.



De reactietijd van 2 minuten afwachten.

Na afloop van de reactietijd wordt de meting automatisch uitgevoerd.

De display toont het resultaat in mg/L Cadmium.

Chemische methode

Cadion

Aanhangsel

Kalibratiefunctie voor fotometers van derden

Conc. = a + b•Abs + c•Abs^2 + d•Abs^3 + e•Abs^4 + f•Abs^5

	ø 16 mm
a	$1.03645 \cdot 10^{+1}$
b	$4.81917 \cdot 10^{+2}$
c	
d	
e	
f	

Verstoringen

Verstoringen	**verstoort vanaf**
Al	25
Ca^{2+}	1000
$Cr_2O_7^{2-}$	100
Cu^{2+}	10
Fe^{3+}	1
Mg^{2+}	1000
Mn^{2+}	10
NH_4^+	100
Ni^{2+}	0,5
Pb^{2+}	100
PO_4^{3-}	100
Zn^{2+}	0,5
NaCl	0,005
$NaNO_3$	0,05
Na_2SO_4	0,005

Literatuurverwijzing

H. Watanabe, H. Ohmori (1979), Dual-wavelength spectrophotometric determination of cadmium with cadion, Talanta, 26 (10), 959-961

[d)] Spectroquant® is een gedeponeerd handelsmerk van Merck KGaA