

**visicolor® Powder Pillows**

## Kieselsäure LR

Reagenziensatz zur photometrischen Bestimmung des Kieselsäuregehaltes in Kesselspeisewasser und ultrareinem Wasser.

### Messbereich:

0,02–2,10 mg/L SiO<sub>2</sub>

0,01–1,00 mg/L Si

### Methode:

Photometrische Bestimmung des Kieselsäuregehaltes mittels Silicomolybdänblau-Methode analog zu APHA 4500-Si E und DIN 38405 – D21.

### Gefahrenhinweis:

Informationen zu Gefahren finden Sie auf dem Außenetikett und im Sicherheitsdatenblatt. Das Sicherheitsdatenblatt können Sie unter [www.mn-net.com/SDS](http://www.mn-net.com/SDS) herunterladen.

### Ausführung:

Wir empfehlen, den Test in einem Kunststoffbecherglas anzusetzen und die Lösung erst unmittelbar vor dem Messen in die Küvette zu überführen.

Benötigtes Zubehör: 2 Reaktionsgläser 16 mm AD (REF 91680) oder 2 Reaktionsgläser 24 mm (REF 936101)

- 1 Reaktionsglas mehrmals mit der Wasserprobe spülen (der pH-Wert der Probe muss zwischen pH 3 und 13 liegen)

### Null (optional):

- 2 Eine Rundküvette mit 5 mL Probe füllen
- 3 Rundküvette von außen säubern
- 4 Rundküvette in das Photometer einsetzen und NULL-Messung durchführen

### Probe:

- |                                                                   |                                                                    |
|-------------------------------------------------------------------|--------------------------------------------------------------------|
| 5 Eine weitere Rundküvette mit 5 mL Probe füllen                  | 11 1 min warten                                                    |
| 6 5 Tropfen Molybdat-Reagenz zugeben                              | 12 Den Inhalt eines Powder Pillows „Ascorbinsäure-Reagenz“ zugeben |
| 7 Rundküvette verschließen und schütteln                          | 13 Rundküvette verschließen und schütteln                          |
| 8 2 min warten                                                    | 14 Rundküvette von außen säubern                                   |
| 9 Den Inhalt eines Powder Pillows „Citronensäure-Reagenz“ zugeben | 15 3 min Reaktionszeit abwarten                                    |
| 10 Rundküvette verschließen und schütteln                         | 16 Messen                                                          |

### Messung:

Bei MACHEREY-NAGEL Photometern siehe Handbuch.

Es sollte zügig gearbeitet werden, da sich bei längerem Stehen der Probe in der Rundküvette Kieselsäure aus dem Glas der Küvette lösen kann. Weiterhin ist darauf zu achten, dass evtl. zum Verdünnen verwendetes destilliertes Wasser kieselensäurefrei ist (REF 918912).

Nach Gebrauch Rundküvette gründlich spülen und verschließen.

Diese Methode ist auch für die Analyse von Meerwasser geeignet.

### Störungen:

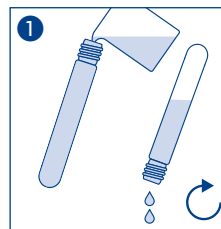
Es stören nicht: < 10 mg/L PO<sub>4</sub><sup>3-</sup>

Es stören: große Mengen Fe<sup>2+/3+</sup>, große Mengen Oxidationsmittel, Sulfide

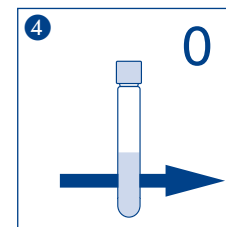
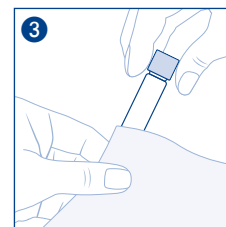
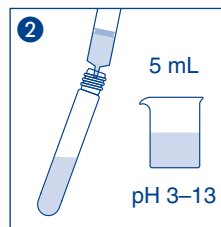
Laut APHA 4500-Si D existiert eine Modifikation der Kieselsäure, welche nicht mit Molybdat reagiert. Diese Molybdat-unreaktive Form kann durch Erhitzen oder Schmelzen mit Base in die reaktive Spezies überführt werden (z.B. Anschluss mit Natriumhydrogencarbonat NaHCO<sub>3</sub>).

### Entsorgung:

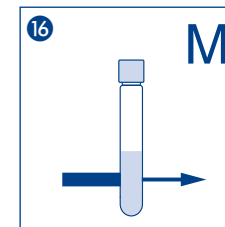
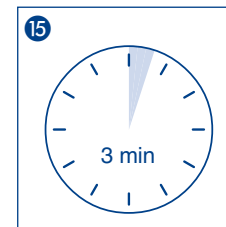
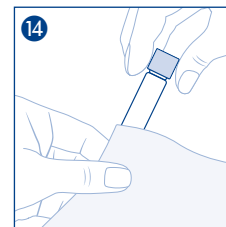
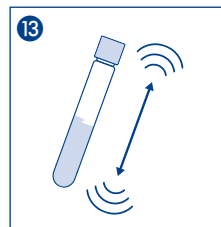
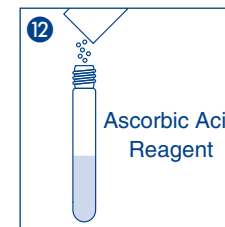
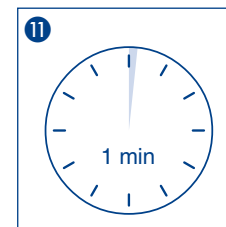
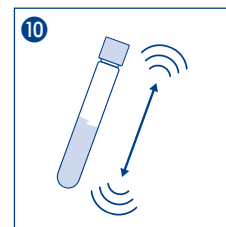
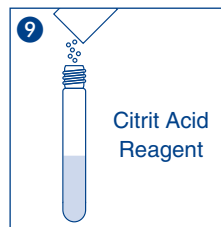
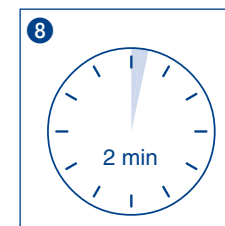
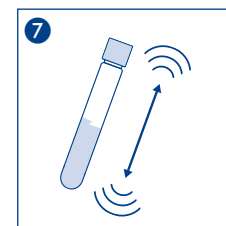
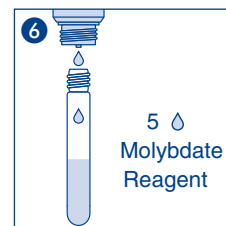
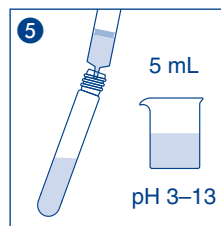
Informationen zur Entsorgung entnehmen Sie bitte dem Sicherheitsdatenblatt. Das Sicherheitsdatenblatt können Sie unter [www.mn-net.com/SDS](http://www.mn-net.com/SDS) herunterladen.



### Null (optional):



### Probe:



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# visicolor® Powder Pillows

## Silica LR

Reagent set for the photometric determination of the silica content in boiler feed water and ultrapure water.

### Measuring range:

0.02–2.10 mg/L SiO<sub>2</sub>

0.01–1.00 mg/L Si

### Method:

Photometric determination of the silica content using the silicomolybdic acid method analogous to APHA 4500-Si E and DIN 38 405 – D21.

### Hazard warning:

Information regarding safety can be found on the box' label and in the safety data sheet. You can download the SDS from [www.mn-net.com/SDS](http://www.mn-net.com/SDS).

### Procedure:

We recommend mixing the sample solution and the reagents in a plastic beaker and transferring the solution to the cuvette directly before measuring.

Requisite accessories: 2 test tubes 16 mm OD (REF 91680) or 2 test tubes 24 mm OD (REF 936101)

- 1 Rinse test tube several times with sample (*pH value of sample must be between pH 3 and 13*)

#### Blank (optional):

- 2 Fill one test tube with 5 mL of sample
- 3 Clean test tube
- 4 Place test tube in photometer as blank value and adjust for zero

#### Sample:

- |                                                        |                                                           |
|--------------------------------------------------------|-----------------------------------------------------------|
| 5 Fill another test tube with 5 mL of sample           | 11 Wait for 1 min                                         |
| 6 Add 5 drops of molybdate reagent                     | 12 Add content of 1 Powder Pillow "ascorbic acid reagent" |
| 7 Close test tube and shake well                       | 13 Close test tube and shake well                         |
| 8 Wait for 2 min                                       | 14 Clean test tube                                        |
| 9 Add content of 1 Powder Pillow "citric acid reagent" | 15 Wait for a 3-min reaction time                         |
| 10 Close test tube and shake well                      | 16 Measure                                                |

### Measurement:

See manual for all MACHEREY-NAGEL photometers.

Work should be performed quickly, since if the sample is allowed to remain in the test tube for a longer period of time, silica can be released from the glass of the test tube. It should additionally be ensured that any distilled water used for dilution is silica-free (REF 918912).

After use, rinse out test tubes thoroughly and seal them.

This method is also suitable for the analysis of sea water.

### Interferences:

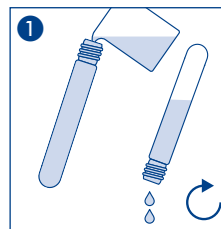
The following will not interfere: < 10 mg/L PO<sub>4</sub><sup>3-</sup>

The following will interfere: large amounts of Fe<sup>2+/3+</sup>, large amounts of oxidising agents, sulphides

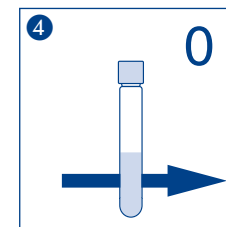
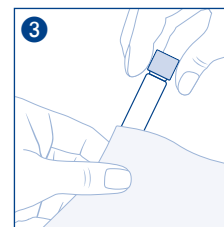
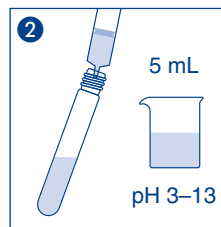
According to APHA 4500-Si D, there is a modification of the silica which does not react with molybdate. This molybdate-unreactive form can be converted into the reactive species through heating or fusing with a base (e.g. digestion with sodium bicarbonate NaHCO<sub>3</sub>).

### Disposal of samples:

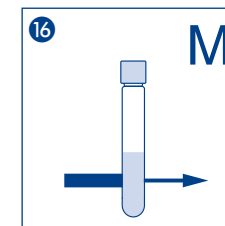
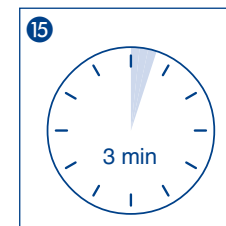
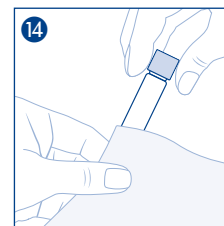
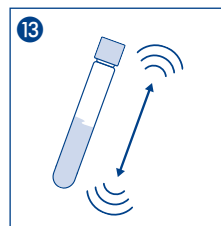
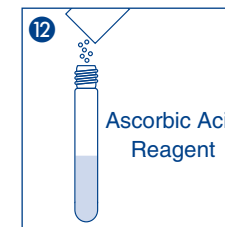
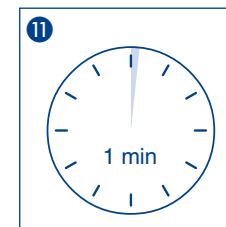
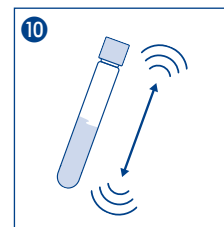
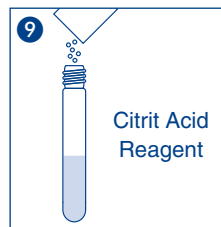
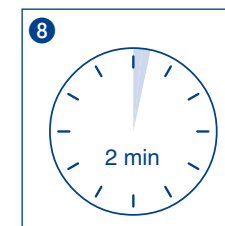
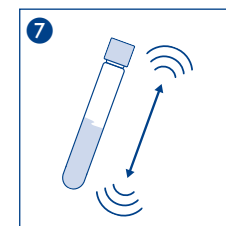
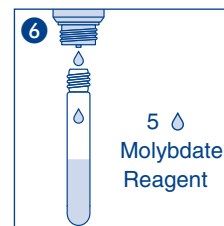
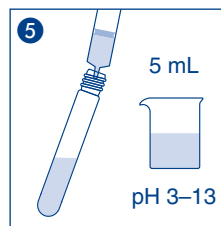
Information regarding disposal can be found in the safety data sheet. You can download the SDS from [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



#### Blank (optional):



#### Sample:



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**visicolor® Powder Pillows**

## Acide silicique LR

Jeu de réactifs pour détermination photométrique de la teneur de l'eau de chaudière et de l'eau ultra pure en acide silicique

### Domaine de mesure :

0,02–2,10 mg/L  $\text{SiO}_2$

0,01–1,00 mg/L Si

### Méthode :

Détermination photométrique de la teneur en acide silicique au moyen de la méthode au bleu de silicomolybdène analogue à la méthode APHA 4500-Si E et selon DIN 38405 - D21.

### Indication de danger :

Vous trouverez des informations sur les risques sur l'étiquette de l'emballage et dans la fiche de données de sécurité. Vous trouverez la fiche de données de sécurité sur le site [www.mn-net.com/SDS](http://www.mn-net.com/SDS) pour la télécharger.

### Exécution :

Nous recommandons de mélanger l'échantillon et les réactifs dans un bécher en plastique et de transvaser la solution dans la cuve immédiatement avant de procéder à la mesure.

Accessoires nécessaires : 2 cuves de réaction de 16 mm de diamètre extérieur (REF 96180) ou 2 cuves de réaction de 24 mm de diamètre extérieur (REF 936101)

- 1 Rincer plusieurs fois la cuve de réaction avec l'échantillon d'eau (le pH de l'échantillon doit se situer entre 1 et 11)

#### Blanc (en option) :

- 2 Remplir une cuve ronde avec un échantillon de 5 mL
- 3 Nettoyer l'extérieur de la cuve ronde
- 4 Placer la cuve ronde dans le photomètre et procéder à la mesure du point zéro

#### Echantillon :

- |                                                                    |                                                                       |
|--------------------------------------------------------------------|-----------------------------------------------------------------------|
| 5 Remplir une autre cuve ronde avec un échantillon de 5 mL         | 11 Attendre 1 minute                                                  |
| 6 Ajouter 5 gouttes de réactif molybdate                           | 12 Ajouter le contenu d'un Powder Pillow « Réactif acide ascorbique » |
| 7 Fermer la cuve et l'agiter                                       | 13 Fermer la cuve et l'agiter                                         |
| 8 Attendre 2 minutes                                               | 14 Nettoyer l'extérieur de la cuve ronde                              |
| 9 Ajouter le contenu d'un Powder Pillow « Réactif acide citrique » | 15 Temps de réaction : attendre 3 minutes                             |
| 10 Fermer la cuve et l'agiter                                      | 16 Mesurer                                                            |

### Mesure :

Se reporter au manuel du photomètre de MACHEREY-NAGEL.

Travailler rapidement car si l'échantillon séjourne longtemps dans la cuve ronde, de l'aide silicique peut se détacher du verre. Veiller à ce que l'eau distillée éventuellement utilisée pour la dilution ne contienne pas d'acide silicique (RÉF 918912).

Après utilisation, rincer à fond la cuve ronde et la fermer.

Cette méthode est également appropriée pour analyser l'eau de mer.

### Interférences :

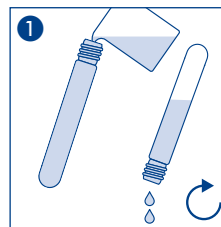
Une quantité < 10 mg/L de  $\text{PO}_4^{3-}$  ne perturbe pas la réaction.

De grandes quantités de  $\text{Fe}^{2+/3+}$ , d'oxydants, de sulfides perturbent la réaction.

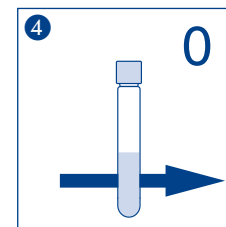
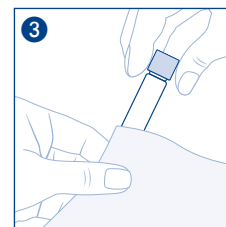
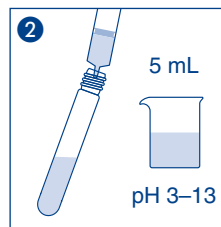
Selon APHA 4500-Si D, il existe une modification de l'acide silicique qui ne réagit pas avec le molybdate. Cette forme non réactive au molybdate peut être convertie par chauffage ou fusion avec une base en une forme réactive au molybdate (p. ex. digestion avec du bicarbonate de sodium  $\text{NaHCO}_3$ ).

### Élimination des échantillons :

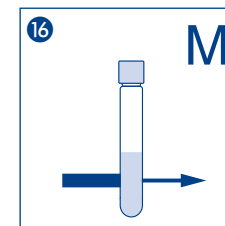
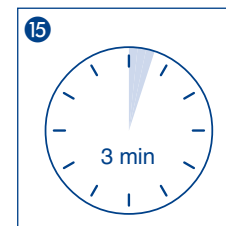
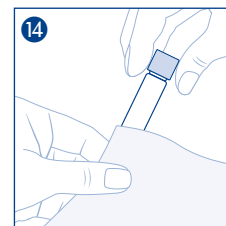
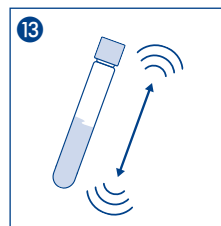
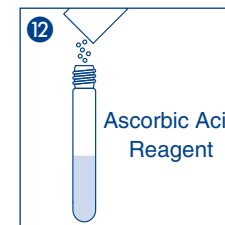
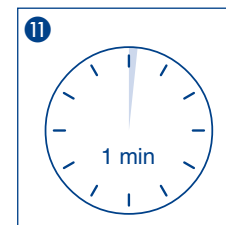
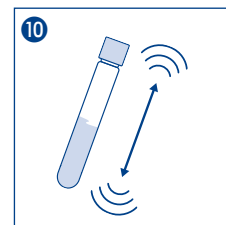
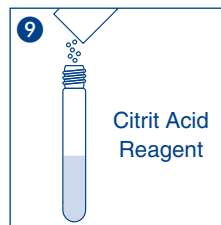
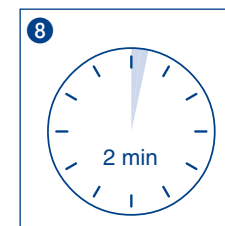
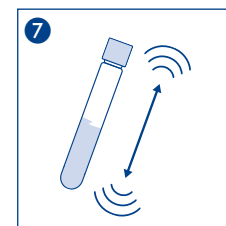
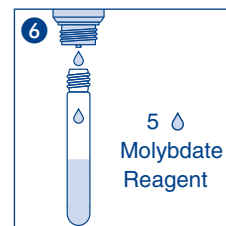
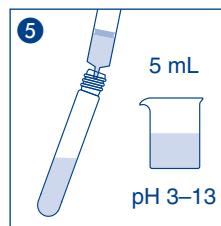
Vous trouverez des informations concernant l'élimination des produits dans la fiche de données de sécurité. Vous trouverez la fiche de données de sécurité sur le site [www.mn-net.com/SDS](http://www.mn-net.com/SDS) pour la télécharger.



#### Blanc (en option) :



#### Echantillon :



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MACHEREY-NAGEL SAS (Société par Actions Simplifiée) au capital de 186600 €

Siret 379 859 531 00020 · RCS Strasbourg B379859531 · N° intracommunautaire FR04 379 859 531

Rev 2023-07 / 936224

**visicolor® Powder Pillows**

## Ácido silícico LR

Kit de reactivos para la determinación fotométrica del contenido de ácido silícico en agua de alimentación de calderas y agua ultrapura.

### Rango de medida:

0,02–2,10 mg/L SiO<sub>2</sub>

0,01–1,00 mg/L Si

### Método:

Determinación fotométrica del contenido de ácido silícico mediante el método de azul de silicomolibdeno análogo a APHA 4500-Si E y DIN 38405 – D21.

### Advertencia sobre peligro:

Encontrará la información sobre los riesgos en la etiqueta exterior y en la ficha de datos de seguridad. Puede descargar la ficha de datos de seguridad en [www.mn-net.com/SDS](http://www.mn-net.com/SDS).

### Procedimiento:

Recomendamos preparar la prueba en un vaso de plástico y transferir la solución a la cubeta justo antes de proceder a la medición.

Accesorios necesarios: 2 tubos de ensayo de 16 mm DE (REF 91680) o 2 tubos de ensayo de 24 mm DE (REF 936101)

- 1 Lave el tubo de ensayo varias veces con la muestra de agua (*el valor pH de la muestra debe hallarse entre 3 y 13*)

### Blanco (opcional):

- 2 Ponga en una cubeta redonda 5 mL de muestra
- 3 Limpie la cubeta redonda por fuera
- 4 Inserte la cubeta redonda en el fotómetro y mida el CERO

### Muestra:

- |                                                                      |                                                                         |
|----------------------------------------------------------------------|-------------------------------------------------------------------------|
| 5 Ponga en una otra cubeta redonda 5 mL de muestra                   | 11 Espere 1 min                                                         |
| 6 Añada 5 gotas de reactivo de molibdato                             | 12 Añada el contenido de un Powder Pillow «Reactivo de ácido ascórbico» |
| 7 Cierre la cubeta redonda y agítela                                 | 13 Cierre la cubeta redonda y agítela                                   |
| 8 Espere 2 min                                                       | 14 Limpie la cubeta redonda por fuera                                   |
| 9 Añada el contenido de un Powder Pillow «Reactivo de ácido cítrico» | 15 Espere un tiempo de reacción de 3 min                                |
| 10 Cierre la cubeta redonda y agítela                                | 16 Realice la medición                                                  |

### Medición:

Consulte el manual del fotómetro MACHEREY-NAGEL.

Se debe proceder con diligencia, ya que si la muestra permanece mucho tiempo en la cubeta redonda, se puede liberar ácido silícico procedente del vidrio de la cubeta. Además se debe tener en cuenta que el agua destilada que se utilice para la dilución no contenga ácido silícico (REF 918912).

Tras el uso, limpie a fondo y cierre la cubeta redonda.

Este método también es adecuado para el análisis de agua de mar.

### Interferencias:

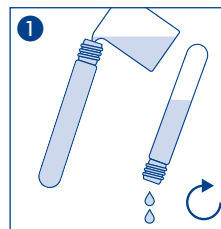
No interfieren: < 10 mg/L PO<sub>4</sub><sup>3-</sup>

Sí interfieren: grandes cantidades de Fe<sup>2+/3+</sup>, grandes cantidades de oxidantes y sulfuros

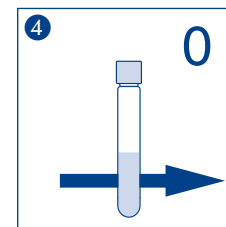
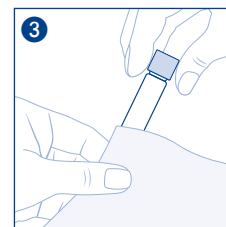
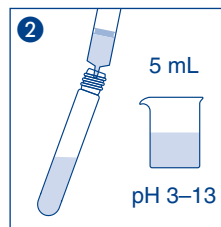
Según APHA 4500-Si D, existe una modificación del ácido silícico que no reacciona con el molibdato. Esta forma no reactiva con molibdato se puede transformar en la especie reactiva por calentamiento o fusión con una base (p. ej. disgregación con hidrogenocarbonato de sodio NaHCO<sub>3</sub>).

### Eliminación:

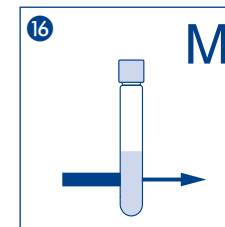
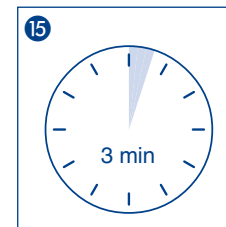
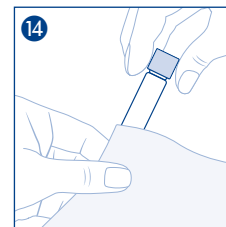
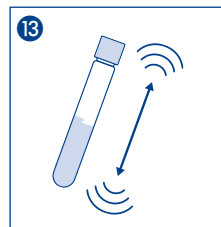
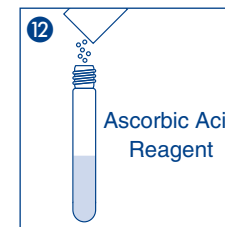
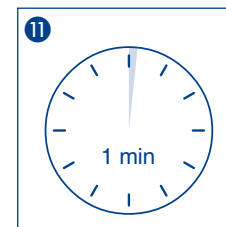
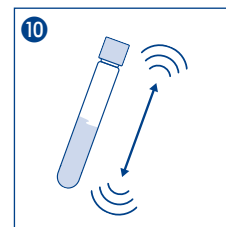
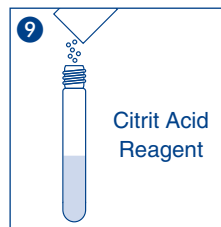
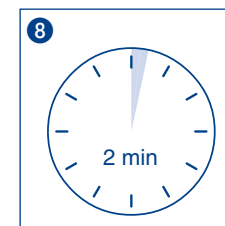
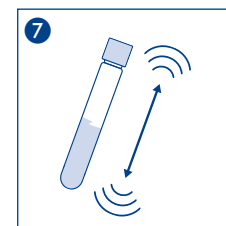
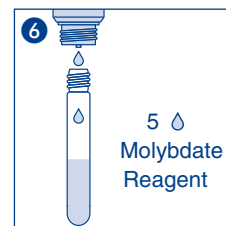
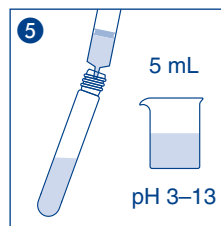
Consulte la información sobre la eliminación en la ficha de datos de seguridad. Puede descargar la ficha de datos de seguridad en [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



### Blanco (opcional):



### Muestra:



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**visicolor® Powder Pillows**

## Kiezelzuur LR

Reagentiaset voor de fotometrische bepaling van het kiezelzuurgehalte in ketelvoedingswater en ultrazuiver water.

### Meetgebied:

0,02–2,10 mg/L  $\text{SiO}_2$

0,01–1,00 mg/L Si

### Methode:

Fotometrische bepaling van het kiezelzuurgehalte middels silico-molybdeenblauw-methode analoog aan APHA 4500-Si E en DIN 38405 – D21.

### Voorzorgsmaatregelen:

Informatie over de gevaren vindt u op het verpakkingsetiket en het veiligheidsinformatieblad. U kunt het veiligheidsinformatieblad downloaden van [www.mn-net.com/SDS](http://www.mn-net.com/SDS).

### Procedure:

Wij raden aan, de monsteroplossing en de reagentia in een plastic beker te mengen en de oplossing pas onmiddellijk voor het meten in de reageerbuis over te gieten.

Benodigde hulpmiddelen: 2 reageerbuizen 16 mm BD (REF 91680) of 2 reageerbuizen 24 mm BD (REF 936101))

- 1 Reageerbuis meerdere malen met het watermonster spoelen (de pH-waarde van het meting moet tussen pH 3 en 13 liggen)

### Nul (optioneel):

- 2 Een reageerbuis met 5 mL meting vullen
- 3 Buitenkant van de reageerbuis schoonmaken
- 4 Reageerbuis in de fotometer plaatsen en NULL-meting uitvoeren

### Meting:

- |                                                                   |                                                                      |
|-------------------------------------------------------------------|----------------------------------------------------------------------|
| 5 De tweede reageerbuis met 5 mL meting vullen                    | 11 1 min wachten                                                     |
| 6 5 druppels molybdaat-reagens toevoegen                          | 12 De inhoud van een Powder Pillow "ascorbinezuur-reagens" toevoegen |
| 7 Reageerbuis sluiten en schudden                                 | 13 Reageerbuis sluiten en schudden                                   |
| 8 2 min wachten                                                   | 14 Buitenkant van de reageerbuis schoonmaken                         |
| 9 De inhoud van een Powder Pillow "citroenzuur-reagens" toevoegen | 15 Reactietijd van 3 min afwachten                                   |
| 10 Reageerbuis sluiten en schudden                                | 16 Meten                                                             |

### Meting:

Bij MACHEREY-NAGEL fotometers zie handboek.

Er moet vlot worden gewerkt, omdat er kiezelzuur uit het glas van de reageerbuis vrij kan komen als het meting langere tijd in de reageerbuis blijft staan. Verder moet erop worden gelet dat evt. voor verdunning gebruikt gedestilleerd water geen kiezelzuur bevat (REF 918912).

Na gebruik reageerbuis grondig spoelen en afsluiten.

Deze methode is ook geschikt voor de analyse van zeewater.

### Storingen:

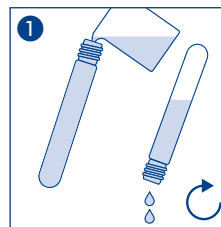
Niet interfererend: < 10 mg/L  $\text{PO}_4^{3-}$

Interfererend: grote hoeveelheden  $\text{Fe}^{2+/3+}$ , grote hoeveelheden oxidatiemiddelen, sulfiden

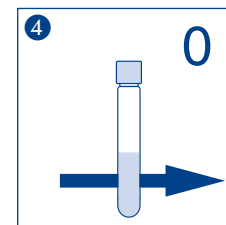
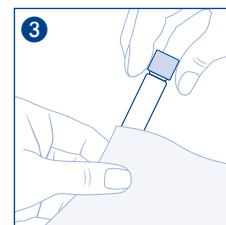
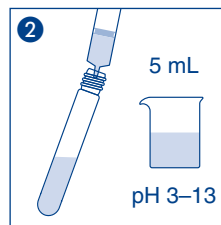
Volgens APHA 4500-Si D bestaat er een modificatie van het kiezelzuur die niet met molybdaat reageert. Deze molybdaat-onreactieve vorm kan door verhitting of smelten met base in de reactieve soort worden overgebracht (bijv. ontleding met natriumwaterstofcarbonaat  $\text{NaHCO}_3$ ).

### Afvalverwerking:

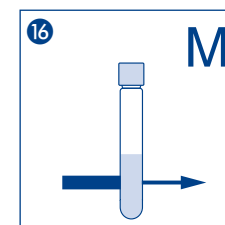
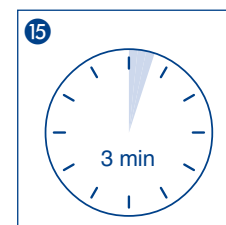
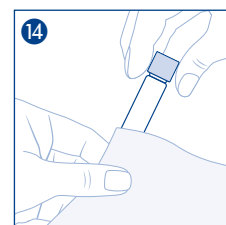
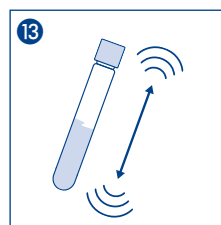
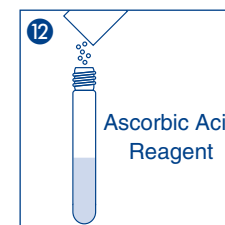
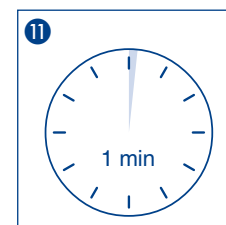
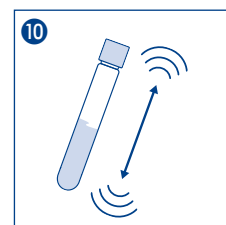
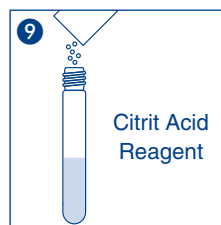
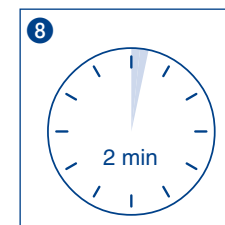
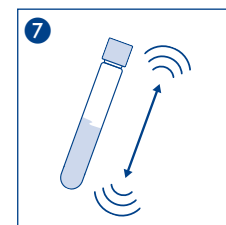
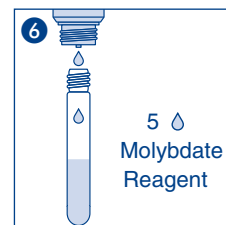
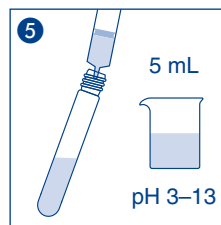
Raadpleeg het veiligheidsinformatieblad voor informatie over de afvoer. U kunt het veiligheidsinformatieblad downloaden van [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



### Nul (optioneel):



### Meting:



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**visicolor® Powder Pillows**

## Acido silicico LR

Kit di reagenti per la determinazione fotometrica dell'acido silicico nelle acque per caldaie e nelle acque ultrapure.

### Intervallo di valori:

0,02–2,10 mg/L SiO<sub>2</sub>

0,01–1,00 mg/L Si

### Metodo:

Determinazione fotometrica dell'acido silicico con il metodo del blu di silicomolibdeno analogamente a APHA 4500-Si E e DIN 38405 – D21.

### Avvisi di pericolo:

Per informazioni sui pericoli, leggere l'etichetta esterna e consultare la scheda di sicurezza. La scheda di sicurezza può essere scaricata dal sito [www.mn-net.com/SDS](http://www.mn-net.com/SDS).

### Procedimento:

Si raccomanda di mettere il test in un becher di plastica e di trasferire la soluzione nella cuvetta appena prima della misurazione.

Materiali necessari: 2 cuvette di reazione da 16 mm DE (diametro esterno) (REF 91680) o 2 cuvette di reazione da 24 mm DE (diametro esterno) (REF 936101)

- 1 Risciacquare più volte la cuvetta di reazione con il campione di acqua (il valore del pH del campione deve essere compreso fra 3 e 13)

### Bianco (opzionale):

- 2 Riempire una cuvetta tonda con 5 mL di campione
- 3 Pulire l'esterno della cuvetta tonda
- 4 Inserire la cuvetta tonda nel fotometro ed effettuare la misurazione al fine di impostare il BIANCO

### Campione:

- |                                                                         |                                                                            |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 5 Riempire un'ulteriore cuvetta tonda con 5 mL di campione              | 11 Attendere 1 min                                                         |
| 6 Aggiungere 5 gocce di reagente molibdato                              | 12 Aggiungere il contenuto di un Powder Pillows "reagente acido ascorbico" |
| 7 Sigillare la cuvetta tonda e agitare                                  | 13 Sigillare la cuvetta tonda e agitare                                    |
| 8 Attendere 2 min                                                       | 14 Pulire l'esterno della cuvetta tonda                                    |
| 9 Aggiungere il contenuto di un Powder Pillows "reagente acido citrico" | 15 Attendere il tempo di reazione di 3 min                                 |
| 10 Sigillare la cuvetta tonda e agitare                                 | 16 Misurare                                                                |

### Misura:

Fare riferimento al manuale relativo ai fotometri MACHEREY-NAGEL.

Si raccomanda di lavorare rapidamente, perché in caso di sosta prolungata del campione nella cuvetta tonda il vetro della cuvetta può rilasciare acido silicico. Inoltre si deve fare attenzione che l'acqua distillata utilizzata eventualmente per la diluizione sia priva di acido silicico (REF 918912).

Dopo l'utilizzo, risciacquare accuratamente e sigillare le cuvette tonde.

Questo metodo è adatto anche per l'analisi di acque marine.

### Interferenze:

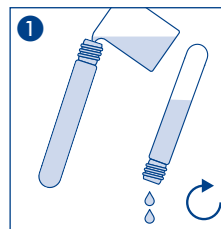
Non creano interferenze: < 10 mg/L PO<sub>4</sub><sup>3-</sup>

Creano interferenze: grandi quantità di Fe<sup>2+/3+</sup>, grandi quantità di ossidante, solfuri

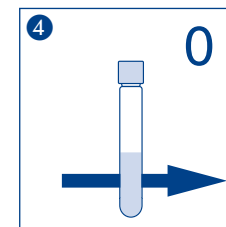
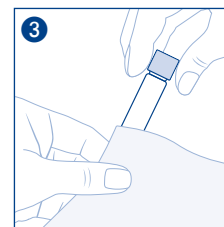
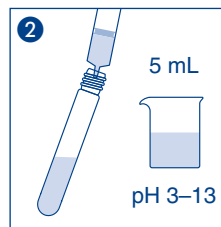
Secondo APHA 4500-Si D esiste una modifica dell'acido silicico che non reagisce con il molibdato. Questa forma non reattiva al molibdato può essere ricondotta alla specie reattiva mediante riscaldamento o fusione con base (ad es. fusione con bicarbonato di sodio NaHCO<sub>3</sub>).

### Smaltimento dei campioni:

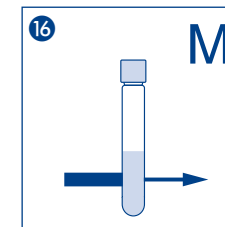
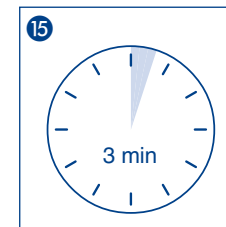
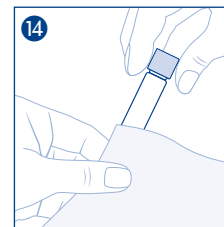
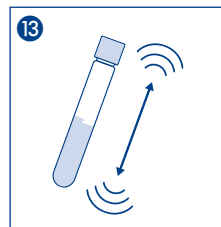
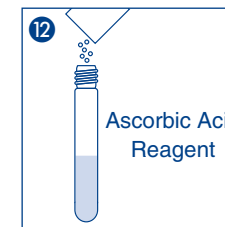
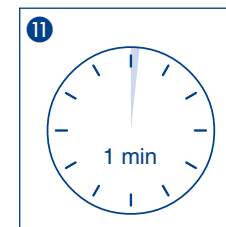
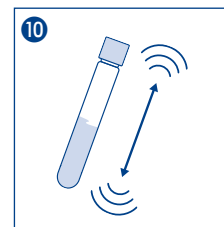
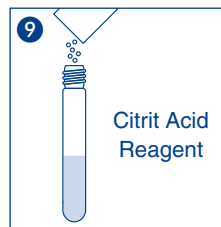
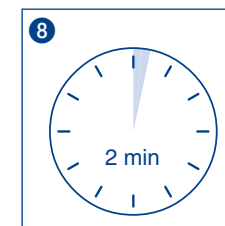
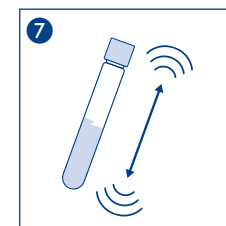
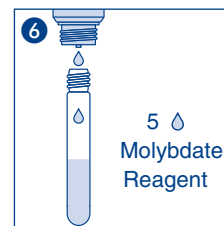
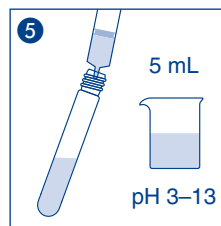
Per informazioni sullo smaltimento, consultare la scheda di sicurezza. La scheda di sicurezza può essere scaricata dal sito [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



### Bianco (opzionale):



### Campione:



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# visocolor® Powder Pillows

## Sílica LR

Conjunto de reagentes para determinação do teor de sílica em água de caldeira e água ultrapura.

### Faixa de medição:

0.02–2.10 mg/L SiO<sub>2</sub>

0.01–1.00 mg/L Si

### Método:

Determinação fotométrica do teor de sílica usando o método do ácido silicomolibdico análogo a APHA 4500-Si E e DIN 38 405 – D21.

### Alerta de perigo:

Informações relativas à segurança podem ser encontradas na etiqueta da embalagem e na FISPQ. Você pode baixar a FISPQ em [www.mn-net.com/SDS](http://www.mn-net.com/SDS).

### Procedimento:

Recomendamos misturar a amostras e o reagentes em um Becker plástico e transferir a solução para uma cubeta diretamente antes da medição.

Acessórios necessários: 2 tubos 16 mm DE (REF 91680) ou 2 tubos 24 mm DE (REF 936101)

- 1 Enxágue o tubo várias vezes com a amostra (o valor do pH deve estar entre 3 and 13)

#### Branco (opcional):

- 2 Transfira para o tubo 5 mL de amostra
- 3 impe o tubo
- 4 Coloque o tubo no fotômetro e ajuste para zero

#### Amostra:

- |                                                                   |                                                                      |
|-------------------------------------------------------------------|----------------------------------------------------------------------|
| 5 Transfira para o tubo 5 mL de amostra                           | 11 Aguarde 1 min                                                     |
| 6 Adicione 5 gotas do reagente molibdato                          | 12 Adicione o conteúdo de 1 Powder Pillow "reagente ácido ascórbico" |
| 7 Feche o tubo e agite bem                                        | 13 Feche o tubo e agite bem                                          |
| 8 Aguarde 2 min                                                   | 14 Limpe o tubo                                                      |
| 9 Adicione o conteúdo de 1 Powder Pillow "reagente ácido cítrico" | 15 Aguarde 3 min                                                     |
| 10 Feche o tubo e agite bem                                       | 16 Meça                                                              |

### Medição:

Consulte o manual de todos os MACHEREY-NAGEL.

A análise deve ser realizada rapidamente, pois se a amostra permanecer no tubo por um período muito longo, a sílica pode ser liberada do vidro do tubo. Além disso, deve-se assegurar que a água usada para diluição seja isenta de sílica (REF 918912).

Após o uso, enxágue bem os tubos e feche-os.

Este método é adequado para análise de água do mar.

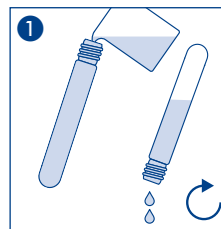
### Interferências:

O seguinte não vai interferir: < 10 mg/L PO<sub>4</sub><sup>3-</sup>

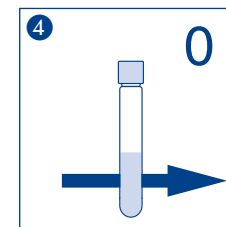
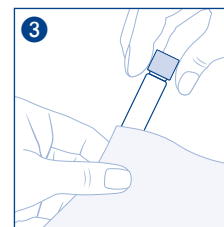
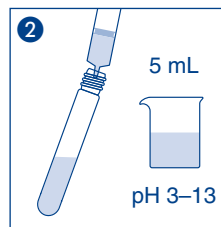
Os seguintes vão interferir: grandes quantidades de Fe<sup>2+/3+</sup>, grandes quantidades de agentes oxidantes, sulfetos. De acordo com APHA 4500-Si D, ocorre uma modificação da sílica que não reage com o molibdato. Esta forma não reativa pode ser convertida na espécie reativa por meio de aquecimento ou fusão com uma base (ex. digestão com bicarbonato de sódio NaHCO<sub>3</sub>).

### Descarte de amostra:

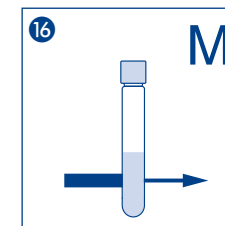
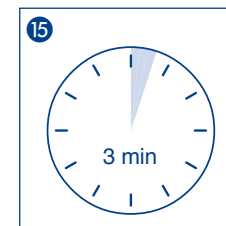
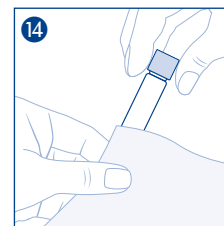
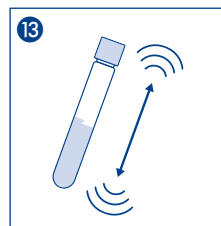
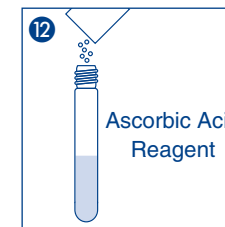
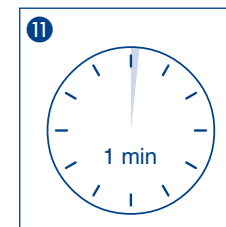
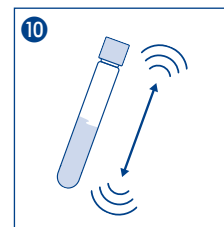
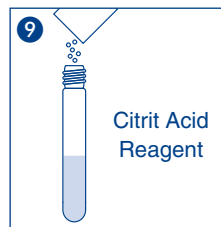
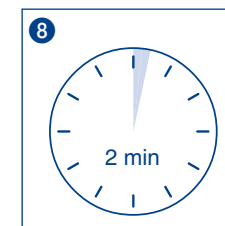
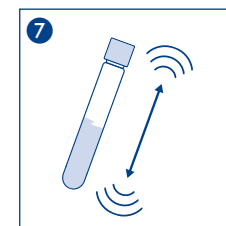
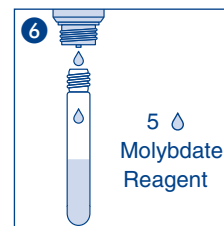
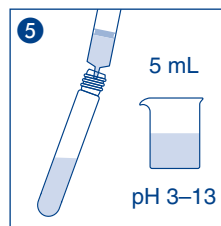
Informações sobre o descarte podem ser encontradas na FISPQ. Você pode baixar a FISPQ em [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



#### Branco (opcional):



#### Amostra:



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