

**visocolor**<sup>®</sup> Powder Pillows

## Ammonium

Reagenziensatz zur photometrischen Bestimmung von Ammonium in Oberflächen-, Grund- und Trinkwasser.

**Hinweis:** Diese Vorschrift gilt für Produkte mit Haltbarkeit bis 09/2027.

### Messbereich:

0,02–0,80 mg/L NH<sub>4</sub>-N (16 mm AD)  
 0,01–0,50 mg/L NH<sub>4</sub>-N (24 mm AD)  
 0,03–1,00 mg/L NH<sub>4</sub> (16 mm AD)  
 0,03–0,50 mg/L NH<sub>4</sub> (24 mm AD)

### Methode:

Photometrische Bestimmung von Ammoniumionen mittels Berthelot-Reaktion.

### 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:

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 4 und 11 liegen)

#### Null (optional):

- 2 Ein weiteres Reaktionsglas mit 5 mL Probe füllen
- 3 Reaktionsglas von außen säubern
- 4 Reaktionsglas in das Photometer einsetzen und Null-Messung durchführen

#### Probe

- 5 Ein weiteres Reaktionsglas mit 5 mL Probe füllen
- 6 Den Inhalt eines Powder Pillows Ammonium zugeben
- 7 Reaktionsglas verschließen und kräftig schütteln
- 8 Reaktionsglas von außen säubern
- 9 Reaktionszeit 30 min abwarten
- 10 Messen

### Messung:

Siehe Handbuch für MACHEREY-NAGEL Photometer.

Nach Gebrauch Rundküvette gründlich spülen und verschließen. Pulverreste können mit schwachen Säuren ausgespült werden.

Diese Methode ist nicht für die Analyse von Meerwasser geeignet.

### Störungen:

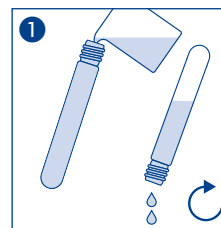
Die Temperatur der Wasserprobe soll zwischen 20 und 30 °C liegen.

Es stören nicht:

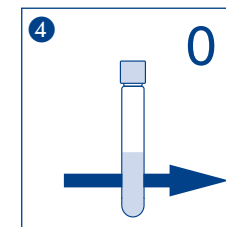
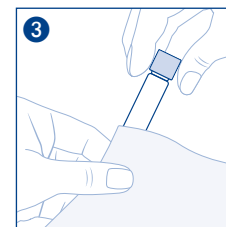
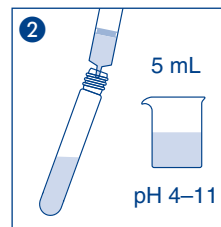
< 500 mg/L Ca<sup>2+</sup>; < 300 mg/L SO<sub>4</sub><sup>2-</sup>; < 100 mg/L Mg<sup>2+</sup>, NO<sub>3</sub><sup>-</sup>; PO<sub>4</sub><sup>3-</sup>; < 10 mg/L NO<sub>2</sub><sup>-</sup>; < 2 mg/L S<sup>2-</sup>

### Entsorgung:

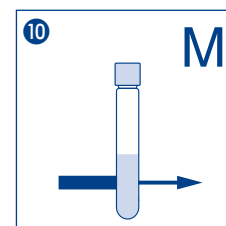
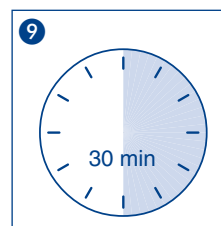
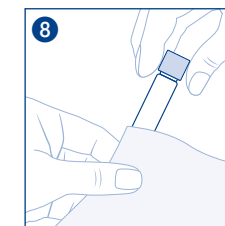
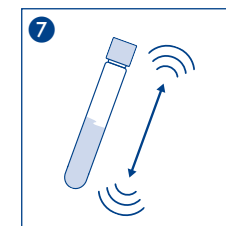
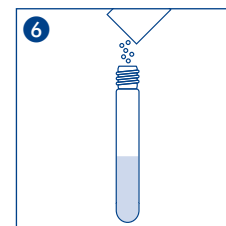
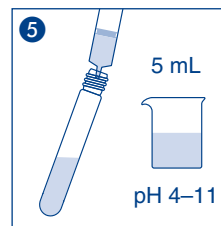
Informationen zur Entsorgung entnehmen Sie bitte dem Sicherheitsdatenblatt. Das Sicherheitsdatenblatt können Sie unter [www.mn-net.com/SDS](http://www.mn-net.com/SDS) herunterladen.



#### Null (optional):



#### Probe:



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Schweiz: MACHEREY-NAGEL AG · Hirsackerstr. 7 · 4702 Oensingen · Schweiz

Tel.: 062 388 55 00 · sales-ch@mn-net.com

# visocolor® Powder Pillows

## Ammonium

Reagent for the photometric determination of Ammonium in surface, ground and drinking water.

**Please Note:** These instructions apply to products with a shelf life up to 09/2027.

### Measuring range:

0.02–0.80 mg/L NH<sub>4</sub>-N (16 mm OD)  
 0.01–0.50 mg/L NH<sub>4</sub>-N (24 mm OD)  
 0.03–1.00 mg/L NH<sub>4</sub> (16 mm OD)  
 0.03–0.50 mg/L NH<sub>4</sub> (24 mm OD)

### Method:

Photometric determination of ammonium ions via Berthelot reaction.

### 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:

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 4 and 11*)

#### 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
- 6 Add content of 1 Powder Pillow Ammonium
- 7 Close test tube and shake well
- 8 Clean test tube
- 9 Wait for 30 min
- 10 Measure

### Measurement:

See manual for all MACHEREY-NAGEL photometers.

After use, rinse out test tubes thoroughly and seal them. Remains of Powder can be dissolved in weakly acidic media.

Not suitable for the analysis of seawater.

### Interferences:

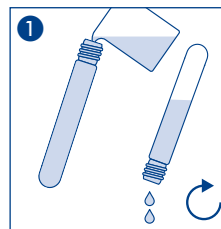
The temperature of the water sample should be between 20 °C and 30 °C.

The following will not interfere:

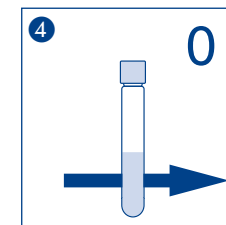
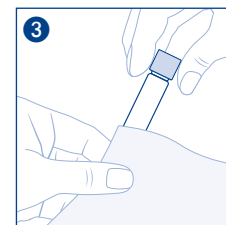
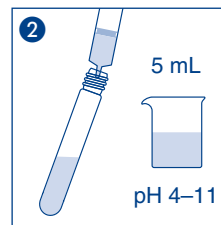
< 500 mg/L Ca<sup>2+</sup>; < 300 mg/L SO<sub>4</sub><sup>2-</sup>; < 100 mg/L Mg<sup>2+</sup>, NO<sub>3</sub><sup>-</sup>; PO<sub>4</sub><sup>3-</sup>; < 10 mg/L NO<sub>2</sub><sup>-</sup>; < 2 mg/L S<sup>2-</sup>

### Disposal of samples:

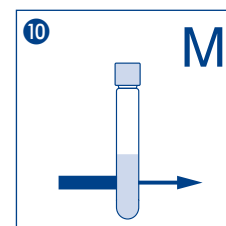
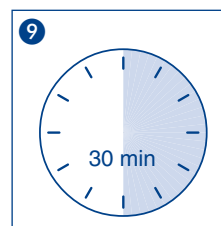
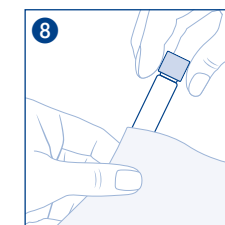
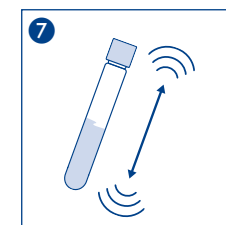
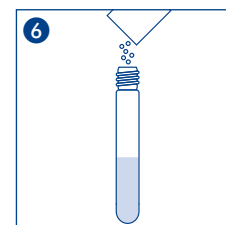
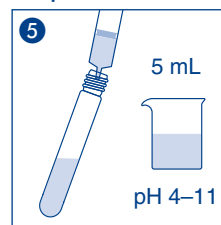
Information regarding disposal can be found in the safety data sheet. You can download the SDS from [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



#### Blank (optional):



#### Sample:



# visicolor® Powder Pillows

## Ammonium

Réactif pour la détermination photométrique de l'ammonium dans des échantillons d'eau de surface, d'eau souterraine et d'eau potable.

Remarque : cette disposition s'applique aux produits dont la durée de vie est inférieure à 09/2027.

### Domaine de mesure :

0,02–0,80 mg/L NH<sub>4</sub>-N (16 mm DE)  
0,01–0,50 mg/L NH<sub>4</sub>-N (24 mm DE)  
0,03–1,00 mg/L NH<sub>4</sub> (16 mm DE)  
0,03–0,50 mg/L NH<sub>4</sub> (24 mm DE)

### Méthode :

Détermination photométrique des ions ammonium par la réaction de Berthelot.

### 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 :

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 (la valeur pH de l'échantillon doit se situer entre pH 4 et 11)

#### Blanc (en option) :

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

#### Echantillon :

- 5 Remplir une autre cuve de réaction avec un échantillon de 5 mL
- 6 Ajouter le contenu d'un Powder Pillow Ammonium
- 7 Fermer la cuve ronde et secouer énergiquement
- 8 Nettoyer l'extérieur de la cuve de réaction
- 9 Attendre 30 min
- 10 Mesurer

### Mesure :

Se reporter au manuel du photomètre de MACHEREY-NAGEL.

Après utilisation, rincer à fond les cuves rondes et les fermer. Les restes de poudre peuvent être dissous dans des solutions légèrement acides.

Cette méthode ne convient pas pour l'analyse de l'eau de mer.

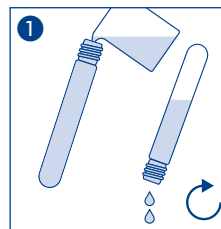
### Interférences :

La température de l'échantillon d'eau doit se situer entre 20 et 30 °C.

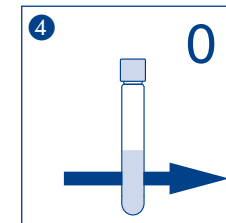
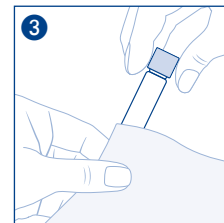
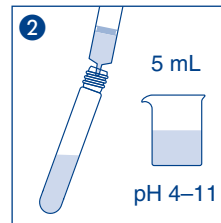
Une quantité < 500 mg/L Ca<sup>2+</sup>; < 300 mg/L SO<sub>4</sub><sup>2-</sup>; < 100 mg/L Mg<sup>2+</sup>, NO<sub>3</sub><sup>-</sup>; PO<sub>4</sub><sup>3-</sup>; < 10 mg/L NO<sub>2</sub><sup>-</sup>; < 2 mg/L S<sup>2-</sup> ne perturbe pas la réaction.

### Élimination des échantillons :

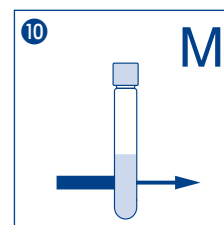
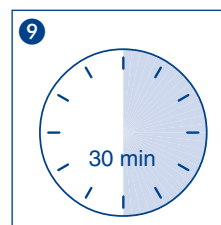
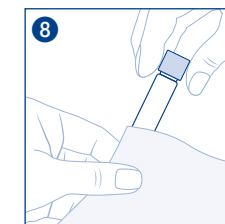
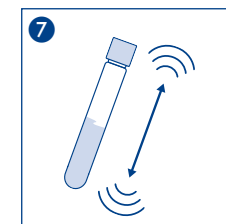
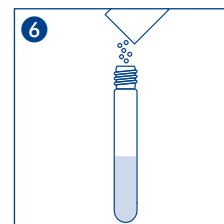
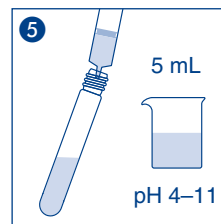
Vous trouverez des informations concernant l'élimination des produits dans la fiche de données de sécurité. Vous trouverez la fiche de données de sécurité sur le site [www.mn-net.com/SDS](http://www.mn-net.com/SDS) pour la télécharger.



#### Blanc (en option) :



#### Echantillon :



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France : MACHEREY-NAGEL SAS · 1, rue Gutenberg – BP135 · 67720 Hoerd · France  
Tél. : 03 88 68 22 68 · sales-fr@mn-net.com

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

**visicolor**® Powder Pillows**Amonio**

Reactivo para la determinación fotométrica del amonio en muestras de agua superficial, agua de suelos y agua potable.

Nota: Este reglamento se aplica a los productos con una vida útil hasta 09/2027.

**Rango de medida:**

0,02–0,80 mg/L NH<sub>4</sub>-N (16 mm DE)

0,01–0,50 mg/L NH<sub>4</sub>-N (24 mm DE)

0,03–1,00 mg/L NH<sub>4</sub> (16 mm DE)

0,03–0,50 mg/L NH<sub>4</sub> (24 mm DE)

**Método:**

Determinación fotométrica de los iones de amonio mediante la reacción de Berthelot.

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:**

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

- Lave el tubo de ensayo varias veces con la muestra de agua (el valor del pH de la muestra debe hallarse entre 4 y 11)

**Blanco (opcional):**

- Llene un tubo de ensayo con 5 mL de muestra
- Limpie el tubo de ensayo desde el exterior
- Inserte el tubo de ensayo en el fotómetro y mida el blanco

**Muestra:**

- Llene otro tubo de ensayo con otros 5 mL de muestra
- Añada el contenido de un Powder Pillow de Amonio
- Cierre el tubo de ensayo y agítela bien
- Limpie el tubo de ensayo desde el exterior
- Espere 30 min
- Realice la medición

**Medición:**

Consulte el manual del fotómetro MACHEREY-NAGEL.

Tras el uso, limpie a fondo el tubo de ensayo y ciérrelo. Los restos de polvo se pueden eliminar con ácido débiles.

Este método no es adecuado para el análisis de agua de mar.

**Interferencias:**

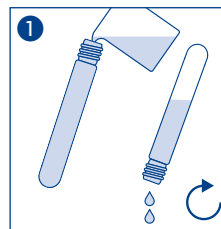
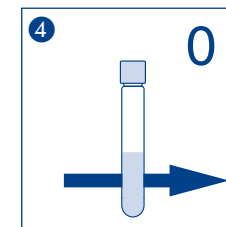
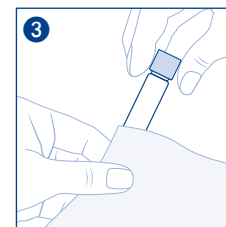
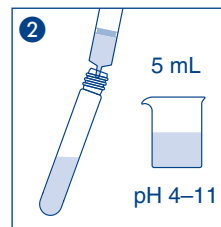
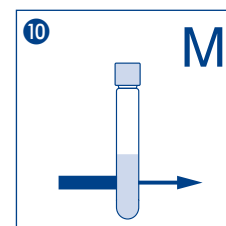
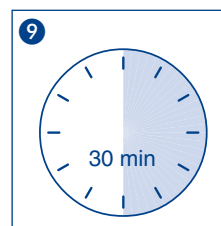
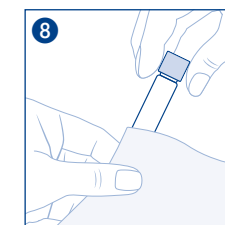
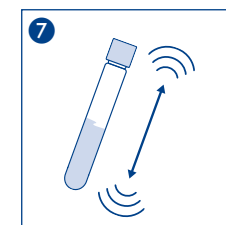
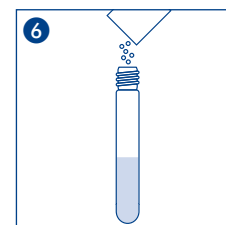
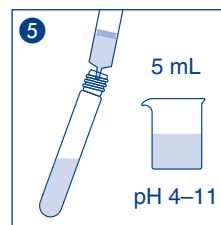
La temperatura de la muestra de agua debe hallarse entre 20 y 30 °C.

No interfieren:

< 500 mg/L Ca<sup>2+</sup>; < 300 mg/L SO<sub>4</sub><sup>2-</sup>; < 100 mg/L Mg<sup>2+</sup>, NO<sub>3</sub><sup>-</sup>; PO<sub>4</sub><sup>3-</sup>; < 10 mg/L NO<sub>2</sub><sup>-</sup>; < 2 mg/L S<sup>2-</sup>

**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:**

# visicolor® Powder Pillows

## Ammonium

Reagenskit voor de fotometrische bepaling van ammonium in oppervlakte-, grond- en drinkwater.

**Opmerking:** Deze verordening is van toepassing op producten met een houdbaarheid tot 09/2027.

### Meetgebied:

0,02–0,80 mg/L NH<sub>4</sub>-N (16 mm BD)

0,01–0,50 mg/L NH<sub>4</sub>-N (24 mm BD)

0,03–1,00 mg/L NH<sub>4</sub> (16 mm BD)

0,03–0,50 mg/L NH<sub>4</sub> (24 mm BD)

### Methode:

Fotometrische bepaling van ammonium via Berthelot-reactie.

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:

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

- 1 Reageerbuis meerdere malen met het watermonster spoelen (de pH-waarde van het monster moet tussen pH 4 en 11 liggen)

#### Nul (optioneel):

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

#### Monster:

- 5 De tweede reageerbuis met 5 mL monsteroplossing vullen
- 6 De inhoud van 1 Powder Pillow Ammonium toevoegen
- 7 Reageerbuis sluiten en krachtig schudden
- 8 Buitenkant van de reageerbuis schoonmaken
- 9 Reactietijd van 30 min afwachten
- 10 Meten

### Meting:

Zie handboek voor MACHEREY-NAGEL fotometer.

Na gebruik reageerbuis grondig spoelen en sluiten. Overblijfselen van poeder kunnen worden opgelost in zwak zure media. Deze methode is niet bruikbaar voor de analyse van zeewater.

### Storingen:

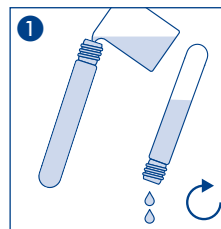
De temperatuur van het watermonster moet tussen 20 en 30 °C liggen.

Niet interfererend:

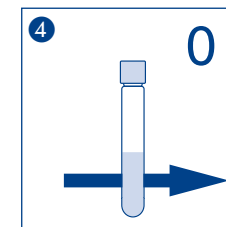
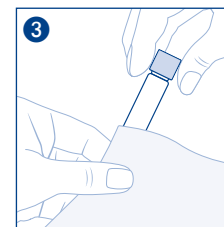
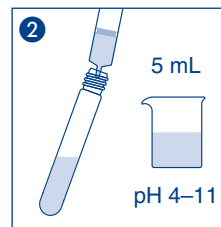
< 500 mg/L Ca<sup>2+</sup>; < 300 mg/L SO<sub>4</sub><sup>2-</sup>; < 100 mg/L Mg<sup>2+</sup>, NO<sub>3</sub><sup>-</sup>; PO<sub>4</sub><sup>3-</sup>; < 10 mg/L NO<sub>2</sub><sup>-</sup>; < 2 mg/L S<sup>2-</sup>

### Afvalverwerking:

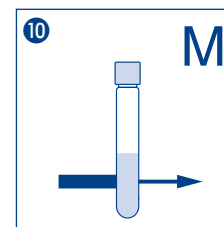
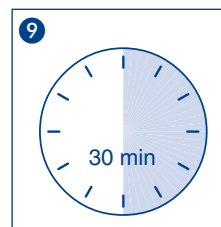
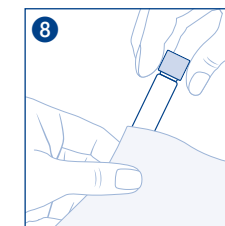
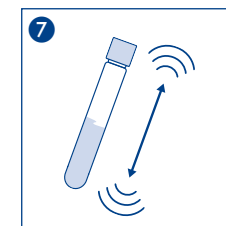
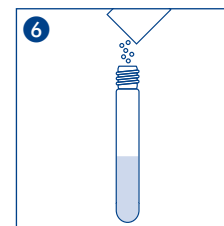
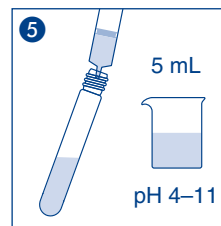
Raadpleeg het veiligheidsinformatieblad voor informatie over de afvoer. U kunt het veiligheidsinformatieblad downloaden van [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



#### Nul (optioneel):



#### Monster:



**visicolor**<sup>®</sup> Powder Pillows

## Ammonio

Reagente per la determinazione fotometrica dell'ammonio in campioni di superficie, di terreno e di acqua potabile.

Nota: questo regolamento si applica ai prodotti con una durata di conservazione fino al 09/2027.

### Intervallo di valori:

0,02–0,80 mg/L NH<sub>4</sub>-N (16 mm DE)  
 0,01–0,50 mg/L NH<sub>4</sub>-N (24 mm DE)  
 0,03–1,00 mg/L NH<sub>4</sub> (16 mm DE)  
 0,03–0,50 mg/L NH<sub>4</sub> (24 mm DE)

### Metodo:

Determinazione fotometrica degli ioni ammonio tramite reazione di Berthelot.

### Advertencia sobre peligro:

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:

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 tra 4 e 11)

### Bianco (opzionale):

- 2 Versare 5 mL di campione in una cuvetta di reazione
- 3 Pulire l'esterno della cuvetta di reazione
- 4 Posizionare nel fotometro la cuvetta di reazione da considerare come valore bianco e impostare lo zero

### Campione:

- 5 Riempire un'ulteriore cuvetta di reazione con 5 mL di campione
- 6 Aggiungere il contenuto di 1 Powder Pillow Ammonio
- 7 Chiudere subito la cuvetta di reazione e agitare
- 8 Pulire l'esterno della cuvetta di reazione
- 9 Attendere 30 min
- 10 Misurare

### Misura:

Fare riferimento al manuale relativo ai fotometri MACHEREY-NAGEL.

Dopo l'utilizzo, risciacquare accuratamente e sigillare le cuvette tonde. I resti di polvere possono essere scolti in mezzi debolmente acidi.

Questo metodo non è adatto per l'analisi delle acque marine.

### Interferenze:

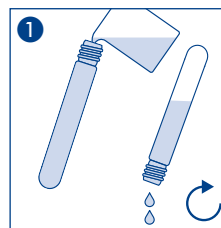
La temperatura del campione di acqua dovrebbe essere compresa tra i 20 °C e i 30 °C.

Non creano interferenze:

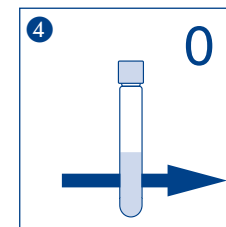
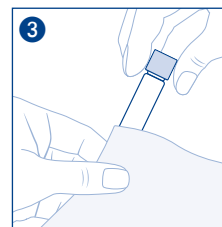
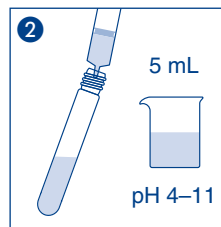
< 500 mg/L Ca<sup>2+</sup>; < 300 mg/L SO<sub>4</sub><sup>2-</sup>; < 100 mg/L Mg<sup>2+</sup>, NO<sub>3</sub><sup>-</sup>; PO<sub>4</sub><sup>3-</sup>; < 10 mg/L NO<sub>2</sub><sup>-</sup>; < 2 mg/L S<sup>2-</sup>

### Eliminación:

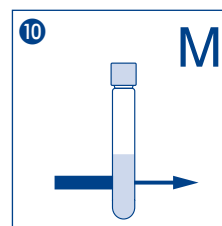
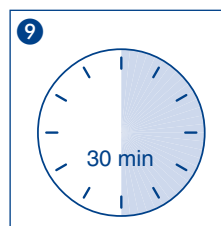
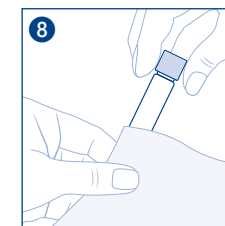
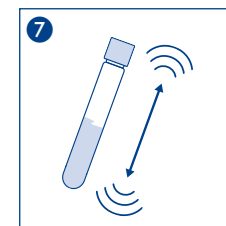
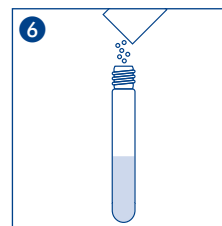
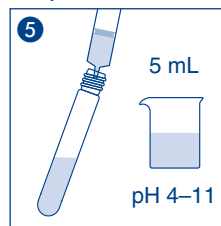
Consulte la información sobre la eliminación en la ficha de datos de seguridad. Puede descargar la ficha de datos de seguridad en [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



### Bianco (opzionale):



### Campione:



MACHEREY-NAGEL GmbH & Co. KG · Valencienner Str. 11 · 52355 Düren · Germania  
 Tel.: +49 24 21 969-0 · info@mn-net.com · [www.mn-net.com](http://www.mn-net.com)

**visocolor**<sup>®</sup> Powder Pillows

## Amônio

Reagente para determinação fotométrica de Amônio em água superficial, subterrânea e potável.

**Observação:** esta norma se aplica a produtos com prazo de validade até 09/2027.

### Faixa de medição:

0,02–0,80 mg/L NH<sub>4</sub>-N (16 mm DE)  
0,01–0,50 mg/L NH<sub>4</sub>-N (24 mm DE)  
0,03–1,00 mg/L NH<sub>4</sub> (16 mm DE)  
0,03–0,50 mg/L NH<sub>4</sub> (24 mm DE)

### Método:

Determinação fotométrica de íons amônio via reação de Berthelot.

### Alerta de perigo:

As 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:

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

- Enxágue o tubo várias vezes com a amostra (o valor do pH da amostra deve estar entre 4 e 11)

#### Branco (opcional):

- Transfira para o tubo 5 mL da amostra
- Limpe o tubo
- Coloque o tubo no fotômetro e ajuste para zero

#### Sample:

- Transfira para o tubo 5 mL de amostra
- Adicione o conteúdo de 1 Powder Pillow Amônio
- Feche o tubo e agite bem
- Limpe o tubo
- Aguarde 30 min
- Meça

### Medição:

Consulte o manual de todos os fotômetros MACHEREY-NAGEL.

Após o uso, enxágue bem os tubos de ensaio e feche-os. Restos de pó podem ser dissolvidos em meio fracamente ácido. Não é adequado para análise de água do mar.

### Interferências:

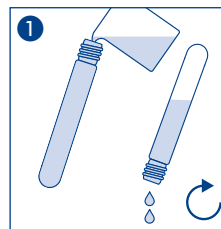
A temperatura da amostra deve estar entre 20 e 30 °C.

### Os seguintes não vão interferir:

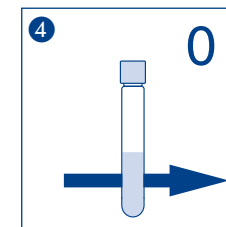
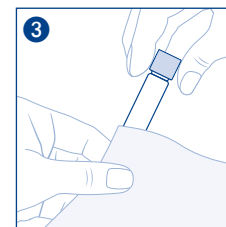
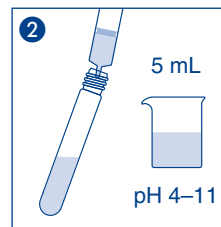
< 500 mg/L Ca<sup>2+</sup>; < 300 mg/L SO<sub>4</sub><sup>2-</sup>; < 100 mg/L Mg<sup>2+</sup>, NO<sub>3</sub><sup>-</sup>; PO<sub>4</sub><sup>3-</sup>; < 10 mg/L NO<sub>2</sub><sup>-</sup>, < 2 mg/L S<sup>2-</sup>

### Descarte de amostra:

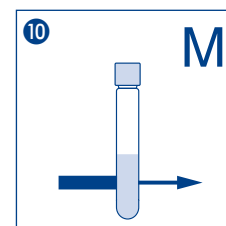
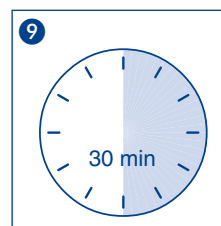
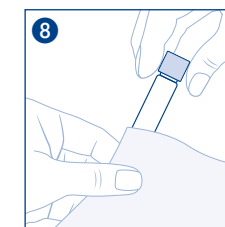
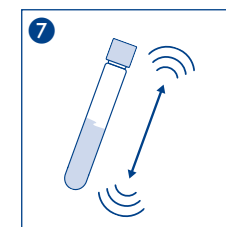
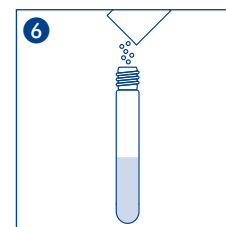
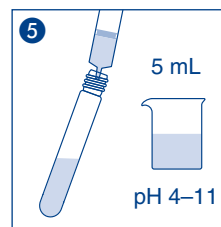
Informações sobre o descarte podem ser encontradas na ficha de informações de segurança de produto químico. Você pode baixar a FISPQ em [www.mn-net.com/SDS](http://www.mn-net.com/SDS).



#### Branco (opcional):



#### Amostra:



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