



A Waters Company



Instructions for Catalog # 540QR Metals in Soil

Revision 111122

Description:

- This standard is packaged in a 2-ounce glass jar containing approximately 30 grams of soil.
- This standard is not preserved.
- The standard can be stored at room temperature.
- The standard will contain all the analytes listed in the ranges specified on the data reporting form.

Before you Begin:

- The Mercury in this standard should be determined using the digestion and analytical procedures in the current version of EPA method 7471, or equivalent.
- The other metals in this standard should be determined using EPA digestion methods 3050 or 3051 followed by your normal analysis procedures.
- This standard should not be analyzed for Hexavalent Chromium. A separate standard, ERA catalog number 921QR, is available for Hexavalent Chromium.
- Although all ERA soil standards have been thoroughly blended prior to shipping, the standards should be homogenized prior to taking an aliquot for analysis due to settling which may occur during shipping.
- The percent moisture of this standard should be determined, and your analytical results adjusted accordingly and reported on a dry weight basis.

Instructions:

1. Open the Metals in Soil standard in a fume hood to avoid inhalation of dust.
2. Mix the sample well prior to removing aliquots for analysis.
3. Digest and analyze the standard using your normal procedures.
4. Determine the percent moisture of an aliquot of the Metals in Soil standard.
5. Report your results as mg/kg on a dry weight basis.

Safety:

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website www.eraqc.com.



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Instructions for Catalog # 500QR

WatR™Pollution Trace Metals

Revision 030512

Description:

- This standard is packaged in a 15 mL screw-top vial containing approximately 14 mL of standard concentrate.
- This concentrate is preserved with approximately 2% (v/v) nitric acid.
- The concentrate can be stored at room temperature.
- The diluted standard will contain all the analytes listed in the ranges specified on the data reporting form.

Before you begin:

- The sample resulting from the dilution described below will have a nitric acid concentration of approximately 0.02% before any acid is added. You may add a volume of acid different from the 2 to 5 mL of HNO₃ suggested in order to matrix match your calibration standards or meet any other method criteria.
- If analyzing this standard using colorimetric techniques, it may be necessary to pH adjust the sample prior to analysis. If using colorimetric techniques, it is acceptable to omit the addition of the 2-5 mL nitric acid suggested.
- While it is technically not necessary to digest this standard prior to analysis, digestion should be performed if this is your normal procedure.
- This standard should be analyzed as soon as possible after the concentrate is diluted.

Instructions:

1. Add 100-200 mL of deionized water and approximately 2 to 5 mL of nitric acid to a clean 500 mL class A volumetric flask.
2. Shake the Trace Metals vial prior to opening.
3. Using a clean, dry, class A pipet, volumetrically pipet 5.0 mL of the concentrate into the 500 mL volumetric flask.
4. Dilute the flask to final volume with deionized water.
5. Cap the flask and mix well.
6. Immediately analyze the diluted sample by your normal procedures.
7. Report your results as µg/L for the diluted sample.

Safety:

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Material Safety Data Sheets (MSDS) for all ERA products are available by calling 1-800-372-0122.



A Waters Company



Instructions for Catalog # 541QR

Cyanide in Soil

Revision 030512

Description:

- This standard is packaged in a 2-ounce glass jar containing approximately 40 grams of soil.
- This standard is not preserved.
- The standard can be stored at room temperature.
- The standard will contain Reactive and Total Cyanide in the range specified on the data reporting form.

Before you Begin:

- This standard is designed to be distilled using the procedures in the most recent revisions of EPA methods 9010, 9012 or equivalent.
- Although all ERA soil standards have been thoroughly blended prior to shipping, the standards should be homogenized prior to taking an aliquot for analysis due to settling which may occur during shipping.
- The percent moisture of this standard should be determined and your analytical results adjusted accordingly and reported on a dry weight basis.

Instructions:

1. Open the Cyanide in Soil standard in a fume hood to avoid inhalation of dust.
2. Mix the sample well prior to removing aliquots for analysis.
3. Distill and analyze the standard using your normal procedures.
4. Determine the percent moisture of an aliquot of the Cyanide in Soil standard.
5. Report your results as mg/kg on a dry weight basis.

Safety:

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Material Safety Data Sheets (MSDS) for all ERA products are available by calling 1-800-372-0122.



A Waters Company



Instructions for Catalog #666QR

WatR™Supply Mercury

Revision 030512

Description:

- This standard is packaged in a 15 mL screw-top vial containing approximately 14 mL of standard concentrate.
- This concentrate is preserved with approximately 1% (v/v) nitric acid and 0.04% (w/v) potassium dichromate.
- The concentrate can be stored at room temperature.
- The diluted standard will contain Mercury in the range specified on the data reporting form.

Before you begin:

- This standard has been prepared as a concentrate and must be diluted prior to analysis.
- The USEPA *Criteria Document* requires that Mercury be present as a mixture of organic and inorganic forms and must, therefore, be analyzed as Total Mercury.
- This standard should be analyzed as soon as possible after the concentrate is diluted.

Instructions:

1. Add 100-200 mL of deionized water and approximately 2 to 5 mL of nitric acid to a clean 500 mL class A volumetric flask.
2. Shake the Mercury vial prior to opening.
3. Using a clean, dry, class A pipet, volumetrically pipet 5.0 mL of the concentrate into the 500 mL volumetric flask.
4. Dilute the flask to final volume with deionized water.
5. Cap the flask and mix well.
6. Immediately analyze the diluted sample by your normal procedures.
7. Report your results as $\mu\text{g/L}$ for the diluted sample.

Safety:

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Material Safety Data Sheets (MSDS) for all ERA products are available by calling 1-800-372-0122.



A Waters Company



Instructions for Catalog # 697QR

WatR™ Supply Metals

Revision 030512

Description:

- This standard is packaged in a 15 mL screw-top vial containing approximately 14 mL of standard concentrate.
- This concentrate is preserved with approximately 2% (v/v) nitric acid.
- The concentrate can be stored at room temperature.
- The diluted standard will contain all the analytes listed in the ranges specified on the data reporting form.

Before you begin:

- This standard has been prepared as a concentrate and must be diluted prior to analysis.
- The sample resulting from the dilution described below will have a nitric acid concentration of approximately 0.01% before any acid is added. You may add a volume of acid different from the 2 to 5 mL of nitric acid suggested in order to match the matrix of your calibration standards or to meet any other method requirements.
- If analyzing this standard using colorimetric techniques, it may be necessary to pH adjust the sample prior to analysis. If using colorimetric techniques, it is acceptable to omit the addition of the 2-5 mL nitric acid suggested.
- While it is technically not necessary to digest this standard prior to analysis, digestion should be performed if this is your normal procedure.
- This standard should be analyzed as soon as possible after the concentrate is diluted.

Instructions:

1. Add 100-200 mL of deionized water and approximately 2 to 5 mL of nitric acid to a clean 1000 mL class A volumetric flask.
2. Shake the Metals vial prior to opening.
3. Using a clean, dry, class A pipet, volumetrically pipet 5.0 mL of the concentrate into the 1000 mL volumetric flask.
4. Dilute the flask to final volume with deionized water.
5. Cap the flask and mix well.
6. Immediately analyze the diluted sample by your normal procedures.
7. Report your results as $\mu\text{g/L}$ for the diluted sample.

Safety:

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Material Safety Data Sheets (MSDS) for all ERA products are available by calling 1-800-372-0122.



A Waters Company



Instructions for Catalog # 983QR

WatR™ Supply Cyanide

Revision 030512

Description:

- This standard is packaged in a 15 mL screw-top vial containing approximately 14 mL of standard concentrate.
- This concentrate is preserved with approximately 0.25%(w/v) sodium hydroxide.
- The concentrate can be stored at room temperature.
- The diluted standard will contain Total Cyanide in the range specified on the data reporting form.

Before you begin:

- This standard has been prepared as a concentrate and must be diluted prior to analysis.
- This standard does not require distillation prior to analysis.
- This standard should be analyzed as soon as possible after the concentrate is diluted.

Instructions:

1. Add 100-200 mL of deionized water and approximately 1 to 2 mL of 50% sodium hydroxide to a clean 1000 mL class A volumetric flask.
2. Shake the Cyanide vial prior to opening.
3. Using a clean, dry, class A pipet, volumetrically pipet 5.0 mL of the concentrate into the 1000 mL volumetric flask.
4. Dilute the flask to final volume with deionized water.
5. Cap the flask and mix well.
6. Immediately analyze the diluted sample by your normal procedures.
7. Report your results as mg/L for the diluted sample.

Safety:

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