TE Color Test Reagent Preparation Log
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Instructions for Use

1. This form is to be used for reagent preparation records used in Trace Evidence, except for reagents which are recorded in the case file.

2. The Reagent name, Preparation Instructions and Chemical names (yellow highlighted areas) shall be reviewed prior to use.

3. The reviewer of the form shall be a supervisor or their designee. The reviewer will ensure that the current preparation instructions and QC requirements are recorded onto the form as required by Section procedures and accurately reflect the current version of the technical procedure manual.

4. The form shall be printed and batches of reagents recorded onto the bottom part of the form.

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5. Preparation instructions may include "recipes" for different final volumes. Different final volumes not listed in the preparation instructions may only be made if allowed by the section procedures. The amounts used of each component shall be documented in the "Chemical" columns. It may be necessary to use two rows for these types of records.

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REAGENT PREPARATION LOG

Reagent: Aqueous Aniline Sulfate

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 5.0 g aniline sulfate in 100 mL deionized water

A drop of aniline sulfate is added to the test solution. Two drops of concentrated sulfuric acid are added. A blue ring at the aqueous/acid interface indicates the presence of chlorate ions.

Check against potassium chlorate. Positive is a blue color.

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Lab	Date	Preparer's	Aniline Sulfate	N/A	N/A	Volume	QC	Expiration
Lot #	Prepared	Initials	Manufacturer/Lot#	Manufacturer/Lot#	Manufacturer/Lot#	Made	Check	Date

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REAGENT PREPARATION LOG

Reagent: Barium Chloride

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 5.0 g barium chloride in 100 mL deionized water (5% solution)

Check against potassium sulfate. Positive is a white precipitate.

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Lab Lot #	Date Prepared	Preparer's Initials	Barium Chloride Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Brucine

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 5.0 g brucine sulfate (brucine sulfate 7-hydrate) in 100 mL concentrated sulfuric acid.

Check against potassium nitrate. Positive is an orange to yellow color.

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Lab	Date	Preparer's	Brucine Sulfate	Conc. Sulfuric Acid	N/A	Volume	QC	Expiration
Lot #	Prepared	Initials	Manufacturer/Lot#	Manufacturer/Lot#	Manufacturer/Lot#	Made	Check	Date

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REAGENT PREPARATION LOG

Reagent: Diphenylamine

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 0.68 g diphenylamine in 45 mL concentrated sulfuric acid. Place in ice bath and cautiously add 22.5 mL glacial acetic acid.

Check against potassium nitrate. Positive is a blue to blue-black color.

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Lab Lot #	Date Prepared	Preparer's Initials	Diphenylamine Manufacturer/Lot#	Conc. Sulfuric Acid Manufacturer/Lot#	Glacial Acetic Acid Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Fehling's

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 7.5 g copper sulfate in 100 mL deionized water. Dissolve 35 g sodium tartrate and 25 g potassium hydroxide in 100 mL deionized water. Mix equal volumes of each solution.

Check against known lactose and sucrose. Positive is a yellow/orange/red precipitate.

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Lab Lot #	Date Prepared	Preparer's Initials	Copper Sulfate Manufacturer/Lot#	Sodium Tartrate Manufacturer/Lot#	Potassium Hydroxide Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Hydrochloric Acid (15.5%)

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Mix 5.0 mL concentrated HCl into 7.0 mL deionized water.

Check against known nylon 6 and nylon 66 fibers. Positive is nylon 6 fiber dissolves, nylon 66 fiber is insoluble.

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Lab Lot #	Date Prepared	Preparer's Initials	Conc. Hydrochloric Acid Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Hypochlorite Test Reagent I

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 2.0 g phenol, 0.01 g sodium nitroprusside, and 1 g sodium hydroxide into 17 mL of deionized water.

This reagent does not require a QC check. QC check completed in conjunction with specific microchemical test.

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Lab Lot #	Date Prepared	Preparer's Initials	Phenol Manufacturer/Lot#	Sodium Nitroprusside Manufacturer/Lot#	Sodium Hydroxide Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: 8 Anion Standard solution for IC

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Mix a 1:1:1:1 ratio of the Dionex Combined 5 Anion Standard, ~100 ppm Chlorite solution, ~100 ppm Nitrite solution, and ~100 ppm Chlorate solution.

The QC check is performed by running a sequence of five consecutive 1:2 dilutions of the standard on the IC.

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Lab Lot #	Date Prepared	Preparer's Initials	~100 ppm ClO2 solution Manufacturer/Lot#	~100 ppm NO2 solution Manufacturer/Lot#	~100 ppm ClO3 solution Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: 8 Anion Standard solution for IC

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Mix a 1:1:1:1 ratio of the Dionex Combined 5 Anion Standard, ~100 ppm Chlorite solution, ~100 ppm Nitrite solution, and ~100 ppm Chlorate solution.

The QC check is performed by running a sequence of five consecutive 1:2 dilutions of the standard on the IC.

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Lab Lot #	Date Prepared	Preparer's Initials	Combined 5 Anion Std. Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: ~100ppm solution of Chlorate anion

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve approximately 2.93 mg of Potassium Chlorate in 20 mL of deionized water, or approximately 1.47 mg in 10 mL.

This solution does not require a QC check. The QC check is completed when it is used to prepare the 8 Anion Standard.

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Lab Lot #	Date Prepared	Preparer's Initials	Potassium Chlorate Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: ~100ppm solution of Chlorite anion

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve approximately 2.66 mg of Sodium Chlorite in 20 mL of deionized water, or approximately 1.33 mg in 10 mL.

This solution does not require a QC check. The QC check is completed when it is used to prepare the 8 Anion Standard.

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Lab Lot #	Date Prepared	Preparer's Initials	Sodium Chlorite Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: ~100ppm solution of Nitrite anion

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve approximately 3.00 mg of Sodium Nitrite in 20 mL of deionized water, or approximately 1.50 mg in 10 mL.

This solution does not require a QC check. The QC check is completed when it is used to prepare the 8 Anion Standard.

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Lab Lot #	Date Prepared	Preparer's Initials	Sodium Nitrite Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: ~100ppm solution of Perchlorate anion

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve approximately 2.78 mg of Potassium Perchlorate in 20 mL of deionized water, or approximately 1.39 mg in 10 mL.

The QC check is performed by diluting the standard to solutions of ~10ppm, ~5ppm, ~2ppm, and ~1ppm and running them on the IC.

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Lab Lot #	Date Prepared	Preparer's Initials	Potassium Perchlorate Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: LeRosen

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Mix 75 mL of concentrated sulfuric acid in 1.5 mL of 37% formaldehyde.

Check against toluene. Positive is a red color.

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Lab Lot #	Date Prepared	Preparer's Initials	Conc. Sulfuric Acid Manufacturer/Lot#	37% Formaldehyde Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: 1-Naphthol

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 15 g 1-naphthol in 100 mL of ethanol. One or two drops of the unknown solution is placed in a white spot plate. Add one drop of naphthol solution and two drops of concentrated sulfuric acid. The appearance of a blue or purple-blue indicates the presence of sugar (sucrose). Check with sucrose. Note Fructose forms a similar purple-blue color. Glucose and maltose form pink colors at the sulfuric acid interface. Nitrates form a yellow-green color which obscures the color test. Keep reagent from light.

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Lab Lot #	Date Prepared	Preparer's Initials	1-Naphthol Manufacturer/Lot#	Ethanol Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Nessler

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 20 g potassium hydroxide in 50 mL deionized water. Dissolve 10 g mercuric iodide and 5 g potassium iodide in 50 mL deionized water. Mix together.

Check against ammonium nitrate. Positive is an orange to brown precipitate.

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Lab Lot #	Date Prepared	Preparer's Initials	Potassium Hydroxide Manufacturer/Lot#	Mercuric Iodide Manufacturer/Lot#	Potassium Iodide Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Nitron

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 3.75 g nitron (diphenylenedianilohydrotriazole) in 75 mL of 88% formic acid

Check against potassium nitrate. Positive is the formation of a white precipitate, often in the form of needles.

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Lab	Date	Preparer's	Dipheynylenedianilohydotriazole	88% Formic Acid	N/A	Volume	QC	Expiration
Lot #	Prepared	Initials	Manufacturer/Lot#	Manufacturer/Lot#	Manufacturer/Lot#	Made	Check	Date

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REAGENT PREPARATION LOG

Reagent: Oxygenate Check Sample for GC-MS

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Mix a 200:1:2:1 ratio of carbon disulfide, acetone, ethanol, and methy ethyl ketone.

The QC check is performed by running the sample on the GC-MS, ensuring that all three oxygenated compounds are present, and ensuring that the abundance from the baseline to the valley between the acetone and ethanol peaks is no greater than approximately 10% of the abundance of the acetone peak.

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Lab Lot #	Date Prepared	Preparer's Initials	Acetone Manufacturer/Lot#	Ethanol Manufacturer/Lot#	Methyl Ethyl Ketone Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Oxygenate Check Sample for GC-MS

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Mix a 200:1:2:1 ratio of carbon disulfide, acetone, ethanol, and methy ethyl ketone.

The QC check is performed by running the sample on the GC-MS, ensuring that all three oxygenated compounds are present, and ensuring that the abundance from the baseline to the valley between the acetone and ethanol peaks is no greater than approximately 10% of the abundance of the acetone peak.

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Lab	Date	Preparer's	Carbon Disulfide	N/A	N/A	Volume	QC	Expiration
Lot #	Prepared	Initials	Manufacturer/Lot#	Manufacturer/Lot#	Manufacturer/Lot#	Made	Check	Date

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REAGENT PREPARATION LOG

Reagent: 2.0 N Potassium Hydroxide

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 11.22 g of potassium hydroxide in 100 mL of methanol.

This reagent does not require a QC check. QC check completed in conjunction with specific microchemical test.

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Lab Lot #	Date Prepared	Preparer's Initials	Potassium Hydroxide Manufacturer/Lot#	Methanol Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Saturated Sodium Hydroxide

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 10 g NaOH in 100 mL deionized water

This reagent does not require a QC check. QC check completed in conjunction with specific microchemical test.

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Lab Lot #	Date Prepared	Preparer's Initials	Sodium Hydroxide Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Silver Nitrate

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 3.75 g silver nitrate in 75 mL deionized water.

Check against sodium chloride. Positive is formation of a white precipitate.

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Lab Lot #	Date Prepared	Preparer's Initials	Silver Nitrate Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: 2.0 N Sodium Hydroxide

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 6.0 g NaOH in 75 mL deionized water.

This reagent does not require a QC check. QC check completed in conjunction with specific microchemical test.

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Lab Lot #	Date Prepared	Preparer's Initials	Sodium Hydroxide Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Sulfuric Acid (75%)

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Mix 56.25 mL concentrated sulfuric acid into 18.75 mL deionized water.

Check against a known nylon fiber. Positive is fiber dissolves.

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Lab Lot #	Date Prepared	Preparer's Initials	Conc. Sulfuric Acid Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Triphenyl Selenium Chloride

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Saturated solution in 60 mL deionized water.

Check against potassium perchlorate. Positive is the formation of a white precipitate.

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Lab Lot #	Date Prepared	Preparer's Initials	Triphenyl Selenium Chloride Manufacturer/Lot#	N/A Manufacturer/Lot#	N/A Manufacturer/Lot#	Volume Made	QC Check	Expiration Date

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REAGENT PREPARATION LOG

Reagent: Triphenyltetrazolium Chloride

Preparation Instructions: (Use additional sheets if needed) **Reviewer/Date&Initials**

Dissolve 0.38 g triphenyltetrazolium chloride in 75 mL deionized water

0.5 N NaOH: Dissolve 1.5 g NaOH in 75 mL deionized water.

Check against lactose and sucrose. Postive is a red color or red precipitate.

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Lab	Date	Preparer's	Triphenyltetrazolium Chloride	Sodium Hydroxide	N/A	Volume	QC	Expiration
Lot #	Prepared	Initials	Manufacturer/Lot#	Manufacturer/Lot#	Manufacturer/Lot#	Made	Check	Date

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