

ble: a 0.25-mm × 30-m capillary column coated with a 1- $\mu$ m layer of phase G2; the injection port temperature is maintained at 150°; the detector temperature is maintained at 300°; the column temperature is maintained at 50° and programmed to rise 10° per minute to 200°. The area of the C<sub>6</sub>H<sub>10</sub>O peak is not less than 98% of the total peak area.

REFRACTIVE INDEX (831): between 1.443 and 1.447 at 20°.

**Metanil Yellow** (*Acid Yellow 36*; 3-(4-Anilinophenylazo)benzenesulfonic Acid Sodium Salt), C<sub>18</sub>H<sub>14</sub>N<sub>3</sub>NaO<sub>3</sub>S—**375.38** [587-98-4]—Use a suitable grade with a dye content of NLT 70%.

**Metaphenylenediamine Hydrochloride** (*Metaphenylenediamine Dihydrochloride*), C<sub>6</sub>H<sub>4</sub>(NH<sub>2</sub>)<sub>2</sub> · 2HCl—**181.06**—White or slightly reddish-white, crystalline powder. Easily soluble in water. On exposure to light it acquires a reddish color. Store it protected from light.

SOLUBILITY: A solution of 1 g in 200 mL of water is colorless.

RESIDUE ON IGNITION (Reagent test): Ignite 1 g with 0.5 mL of sulfuric acid: the residue weighs not more than 1 mg (0.1%).

[NOTE—Metaphenylenediamine hydrochloride solution can be decolorized by treatment with a small quantity of activated charcoal.]

**Metaphosphoric Acid** (*Vitreous Sodium Acid Metaphosphate*), HPO<sub>3</sub>—**79.98** [37267-86-0]—Use ACS reagent grade.

**Methacrylic Acid** [79-41-4]—Use a suitable grade.

**Methanesulfonic Acid**, CH<sub>4</sub>O<sub>3</sub>S—**96.11** [75-75-2]—Use a suitable grade.

**Methanol** (*Methyl Alcohol*), CH<sub>3</sub>OH—**32.04** [67-56-1]—Use ACS reagent grade.

**Methanol, Aldehyde-Free**, CH<sub>3</sub>OH—**32.04**—Dissolve 25 g of iodine in 1 L of methanol and pour the solution, with constant stirring, into 400 mL of 1 N sodium hydroxide. Add 150 mL of water, and allow to stand for 16 hours. Filter, and boil under a reflux condenser until the odor of iodoform disappears. Distill the solution by fractional distillation. It contains not more than 0.001% of aldehydes and ketones.

**Methanol, Anhydrous**—Use Methanol.

**Methanol, Spectrophotometric**—Use ACS reagent grade Methanol Suitable for Use in UV Spectrophotometry.

**Methenamine** (*Hexamethylenetetramine*; *Urotropine*; *Uritone*; *Hexamine*), C<sub>6</sub>H<sub>12</sub>N<sub>4</sub>—**140.19** [100-97-0]—Use ACS reagent grade Hexamethylenetetramine.

**L-Methionine Sulfoxide** (*L-2-Amino-4-(methylsulfinyl)butanoic acid*), C<sub>5</sub>H<sub>11</sub>NO<sub>3</sub>S—**165.21** [3226-65-1]—Use a suitable grade.

**p-Methoxyacetophenone** (*4'-Methoxyacetophenone*; *4-Acetylanisole*), C<sub>9</sub>H<sub>10</sub>O<sub>2</sub>—**150.17** [100-06-1]—Use a suitable grade with a content of NLT 99%.

**7-Methoxycoumarin** (*Herniarin*; *Methyl Umbelliferyl Ether*), C<sub>10</sub>H<sub>8</sub>O<sub>3</sub>—**176.17** [531-59-9]—Use a suitable grade with a content of not less than 98%.

**Methoxyethanol** (*Ethylene Glycol Monomethyl Ether*; *2-Methoxyethanol*), CH<sub>3</sub>OCH<sub>2</sub>CH<sub>2</sub>OH—**76.09** [109-86-4]—Use ACS reagent grade.

**2-Methoxyethanol** (*Ethylene Glycol Monomethyl Ether*; *Methoxyethanol*), CH<sub>3</sub>OCH<sub>2</sub>CH<sub>2</sub>OH—**76.09** [109-86-4]—See *Methoxyethanol*.

**5-Methoxy-1H-benzimidazole-2-thiol** (*5-Methoxy-2-benzimidazolethiol*), C<sub>8</sub>H<sub>8</sub>N<sub>2</sub>OS—**180.23** [37052-78-1]—Use a suitable grade with a content of NLT 99.0%.

**5-Methoxy-2-methyl-3-indoleacetic Acid**, C<sub>12</sub>H<sub>13</sub>NO<sub>3</sub>—**219.24** [2882-15-7]—Off-white powder.

ASSAY: Transfer about 110 mg, accurately weighed, to a 100-mL beaker. Add 30 mL of methanol and dissolve by stirring. Add 40 mL of water, and mix. Titrate with 0.1 N sodium hydroxide VS, determining the endpoint potentiometrically. Perform a blank determination and make any necessary correction. Each mL of 0.1 N sodium hydroxide is equivalent to 21.92 mg of C<sub>12</sub>H<sub>13</sub>NO<sub>3</sub>. Not less than 98% is found.

MELTING RANGE (741): between 161° and 168°, but the range between beginning and end of melting does not exceed 3°.

**Methoxyphenylacetic Acid** ( *$\alpha$ -Methoxyphenylacetic Acid*), C<sub>9</sub>H<sub>10</sub>O<sub>3</sub>—**166.2** [7021-09-2]—Use a suitable grade.

**Methyl Acetate**, C<sub>3</sub>H<sub>6</sub>O<sub>2</sub>—**74.08** [74-20-9]—Colorless liquid. Soluble in water. Miscible with alcohol and with ether.

SPECIFIC GRAVITY (841): about 0.933.

REFRACTIVE INDEX (831): between 1.3615 and 1.3625 at 20°.

BOILING RANGE (Reagent test): Not less than 95% distills between 57° and 58°.

**Methyl 4-Aminobenzoate**, C<sub>8</sub>H<sub>9</sub>NO<sub>2</sub>—**151.16** [619-45-4]—Off-white powder.

ASSAY: Dissolve about 38 mg, accurately weighed, in 50 mL of glacial acetic acid. Titrate with 0.1 N perchloric acid VS, determining the endpoint potentiometrically. Perform a blank determination, and make any necessary correction. Each mL of 0.1 N perchloric acid is equivalent to 15.12 mg of C<sub>8</sub>H<sub>9</sub>NO<sub>2</sub>. Not less than 99.0% is found.

MELTING RANGE (741): between 108° and 110°.

**Methyl Arachidate** (*Eicosanoic acid, methyl ester*), C<sub>21</sub>H<sub>42</sub>O<sub>2</sub>—**326.56** [1120-28-1]—Off-white flakes.

ASSAY: Inject an appropriate specimen into a gas chromatograph (see *Chromatography* (621)) equipped with a thermal-conductivity detector, helium being used as the carrier gas. The following conditions have been found suitable: a 2.0-mm × 1.8-m glass column packed with 5% G2 phase on support S1A; the injection port temperature is maintained at 300°; the detector temperature is maintained at 300°; the column temperature is maintained at 230° and programmed to rise 3° per minute to 280°. The area of the C<sub>2</sub>H<sub>42</sub>O<sub>2</sub> peak is not less than 99% of the total peak area.

MELTING RANGE (741): between 46° and 51°.

**Methyl Behenate**, C<sub>23</sub>H<sub>46</sub>O<sub>2</sub>—**354.61** [929-77-1]—White powder.

ASSAY: Inject an appropriate specimen into a gas chromatograph (see *Chromatography* (621)) equipped with a thermal conductivity detector, helium being used as the carrier gas. The following conditions have been found suitable: a 2.0-mm × 1.8-m glass column packed with 5% G3 phase on support S1A; the injection port temperature is maintained at 300°; the detector temperature is maintained at 300°; the initial temperature of the oven is 220°, which is held for 2 minutes, and then programmed to rise 3° per minute to attain a final temperature of 270°, which is held for 10 minutes. The area of the C<sub>23</sub>H<sub>46</sub>O<sub>2</sub> peak is not less than 98% of the total peak area.