



Standard Specification for Rubber—Concentrated, Ammonia Preserved, Creamed, and Centrifuged Natural Latex¹

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1. Scope

1.1 This specification covers requirements for first grade concentrated natural rubber latex (see [Table 1](#)) of the following categories:

Category 1—Centrifuged *Hevea* natural latex preserved with ammonia only or by formaldehyde followed by ammonia.

Category 2—Creamed *Hevea* natural latex preserved with ammonia only or by formaldehyde followed by ammonia.

Category 3—Centrifuged *Hevea* natural latex preserved with low ammonia with other necessary preservatives.

Category 4—Centrifuged, or centrifuged and creamed, guayule latex, or other natural rubber latex, containing less than 200 μg total protein per gram dry weight of latex, with ammonia or other hydroxide, with other necessary preservatives and stabilizers.

Category 5—Centrifuged *Hevea* natural latex treated with aluminum hydroxide or by other means, preserved with ammonia only or by formaldehyde followed by ammonia containing less than 0.5 % non-rubber content.

1.2 This specification is not necessarily applicable to latices prepared or preserved by other methods, and shall not be construed as limiting the desirability or usefulness of other categories of latices. It does apply to natural latex sources other than *Hevea brasiliensis* but does not apply to compounded latex concentrates.

1.3 The analytical procedures applicable to the specifications are included and appear in the following order:

	Section
Sampling	6 and 7
Total Solids	8
Dry Rubber Content	9
Protein Content	10
Total Alkalinity	11
Viscosity	12
Sludge Content	13
Coagulum Content	14
KOH Number	15
pH	16

Mechanical Stability	17
Copper and Manganese	18
Density	19 – 31
Volatile Fatty Acids	32 – 36
Boric Acid	37
Dry Films	38
Precision for All Test Methods	39

1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 ASTM Standards:²

- D1278 Test Methods for Rubber from Natural Sources—Chemical Analysis
- D4483 Practice for Evaluating Precision for Test Method Standards in the Rubber and Carbon Black Manufacturing Industries
- D5712 Test Method for Analysis of Aqueous Extractable Protein in Latex, Natural Rubber, and Elastomeric Products Using the Modified Lowry Method
- D6499 Test Method for The Immunological Measurement of Antigenic Protein in Natural Rubber and its Products
- E70 Test Method for pH of Aqueous Solutions With the Glass Electrode

3. General Specification Requirements

3.1 In manufacturing, the material shall be processed in accordance with the best commercial practice and shall be of uniform composition.

3.2 The material shall conform to the chemical and physical requirements prescribed in [Table 1](#).

4. Significance and Use

4.1 This specification denotes limits on the 4 categories of latex as defined in the scope and defines the test methods to use for the specified properties. These test methods may be used for production control or for referee purposes.

¹ This specification is under the jurisdiction of ASTM Committee D11 on Rubber and is the direct responsibility of Subcommittee D11.22 on Natural Rubber.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.