Centrifuged natural rubber latex – Specification
Foreword

This Philippine National Standard on Centrifuged natural rubber latex – Specification (DPNS 202:2013) was prepared by the Bureau of Product Standards’ Technical Committee on Rubber and Rubber Products (BPS/TC 16). This standard supersedes the one issued in 2009.

In this reissue, the referred standards and the composition of TC members were updated.
1 Scope

This standard specifies the requirements for natural rubber latices which are preserved wholly or in part with ammonia and which have been concentrated by centrifuging. It does not apply to latices which have been concentrated by evaporation, or to latices from natural sources other than *Hevea brasiliensis* or to compounded latex or vulcanized latex.

This standard applies only to high ammonia and low ammonia centrifuged natural rubber latex.

2 References

The titles of the standards publications referred to in this standard are listed on the inside back cover.

3 Types

3.1 NR latex, type HA – Centrifuged latex preserved with ammonia only or with formaldehyde followed by ammonia, with an alkalinity of at least 0.60 % (m/m) on the latex.

3.2 NR latex, type LA – Centrifuged latex preserved with ammonia together with other preservative(s), with an alkalinity of not more than 0.29 % (m/m) on the latex.

4 Requirements

The latex if required shall conform to the requirements for total solids content and shall conform to all the other requirements given in Table 1. If the latex contains preservative(s) other than ammonia or formaldehyde, the chemical nature and approximate quantity of such other preservative(s) shall be stated. The latex shall not contain fixed alkali added at any stage during production.

5 Sampling

The latex shall be sampled by any one of the methods specified in DPNS ISO 123.

6 Test method

The test method shall be in accordance in Table 1.
# Table 1 - Requirements

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Type HA</th>
<th>Type LA</th>
<th>Method of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total solids, (^a) % (m/m), min.</td>
<td>61.5</td>
<td>61.5</td>
<td>PNS ISO 124</td>
</tr>
<tr>
<td>Dry rubber content, % (m/m), min.</td>
<td>60.0</td>
<td>60.0</td>
<td>DPNS ISO 126</td>
</tr>
<tr>
<td>Non-rubber solids,(^b)% (m/m), max.</td>
<td>2.0</td>
<td>2.0</td>
<td>-</td>
</tr>
<tr>
<td>Alkalinity (as NH(_3)) on latex, % (m/m)</td>
<td>0.60 min.</td>
<td>0.29 max.</td>
<td>PNS ISO 125</td>
</tr>
<tr>
<td>Coagulum content, % (m/m) of total solids, max.</td>
<td>0.05</td>
<td>0.05</td>
<td>DPNS ISO 706</td>
</tr>
<tr>
<td>Copper content, % mg/kg of total solids, max.</td>
<td>8</td>
<td>8</td>
<td>DPNS ISO 8053</td>
</tr>
<tr>
<td>Manganese content, mg/kg of total solids, max.</td>
<td>8</td>
<td>8</td>
<td>DPNS ISO 7780</td>
</tr>
<tr>
<td>Volatile fatty acid number (VFA), max.</td>
<td>0.20</td>
<td>0.20</td>
<td>DPNS ISO 506</td>
</tr>
<tr>
<td>KOH number,(^c) max.</td>
<td>1.0</td>
<td>1.0</td>
<td>DPNS ISO 127</td>
</tr>
<tr>
<td>Color on visual inspection</td>
<td>No pronounced blue or gray</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Odor after neutralization with boric acid</td>
<td>No pronounced odor of putrefaction</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

\(^a\) Optional requirement.

\(^b\) Difference between total solids content and dry rubber content.

\(^c\) If the latex contains boric acid, the KOH number may exceed the specified value by an amount equivalent to the boric acid content as determined by the method specified in DPNS ISO 1802.
The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

**DPNS ISO 123:2013**
Rubber latex – Sampling

**PNS ISO 124:2012**
Rubber latices – Determination of total solid content

**PNS ISO 125:2012**
Rubber latex, natural – Determination of alkalinity

**DPNS ISO 126:2013**
Rubber latex, natural – Determination of dry rubber content

**DPNS ISO 127:2013**
Rubber latex, natural – Determination of KOH number

**DPNS ISO 506:2013**
Natural rubber latex – Determination of volatile fatty acid number

**DPNS ISO 706:2013**
Rubber latices – Determination of coagulum content

**DPNS ISO 8053:2013**
Rubber and latex – Determination of copper content – Photometric method

**DPNS ISO 7780:2013**
Rubbers and rubber latices – Determination of manganese content – Sodium periodate photometric methods

**DPNS ISO 1802:2013**
Natural rubber latex concentrate – Determination of boric acid

**Abbreviations**

PNS - Philippine National Standard
ISO - International Organization for Standardization
Technical Committee 16 – Rubber and Rubber Products

Chairman
1  Exequiel M. Dy
   Ryco, Inc.

Vice-Chairman
2  Elpidio L. Carlota
   Philippine Rubber Industries Association (PRIA)

Members

Associations:
3  Nilo Luna
   Tire Importers and Trade Association of the Philippines (TITAP)

4  Jose Pepito
   Nationwide Association of Consumers, Inc. (NACI)

Manufacturers:
5  Rolando Abesamis
   Menzi Agricultural Corporation

6  Walter Cajipe
   Torus Rubber Inc.

7  Kwan Ming Dee
   Titan Rubber Ind’l. Mfg. Corp.

Project Manager:
15  Ledilla G. Papa
    Bureau of Product Standards

Testing Institution:
8  Adelaida Senica
   Industrial Technology Development Institute (ITDI/DOST)

Research Institution:
9  Belen B. Bisana
   Forest Products Research and Development Institute (FPRDI/DOST)

Importer
10  Leonardo P. Custodio
    One FS Industrial Corp.