1. Scope

This standard prescribes the specifications and identification for quality criteria of Borax to be used as an ingredient in traditional medicine formulations. The raw borax cannot be applicable as a single component.

2. Definition

Borax is known as (LetChar) in Myanmar.

Chemical Formula - \( \text{Na}_2\text{B}_4\text{O}_7\cdot 10\text{H}_2\text{O} \)

Content – 99.0 per cent to 103.0 per cent of \( \text{Na}_2\text{B}_4\text{O}_7\cdot 10\text{H}_2\text{O} \)

3. Description

Borax shall be in the form of hard, odorless, colorless or white crystals or crystalline powder consisting essentially of sodium tetraboratedecahydrate (\( \text{Na}_2\text{B}_4\text{O}_7\cdot 10\text{H}_2\text{O} \)). It shall be free from visible impurities and other foreign matter. The material effloresces in dry air.

4. Specification

The material shall also comply with the requirements given in Table 1, when tested according to the methods prescribed in Appendices.

Table (1). Requirements of Borax for Traditional Medicine

<table>
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<th>Method of Test</th>
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<td>1.</td>
<td>Sodium tetraborate content by mass</td>
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<td>Assay</td>
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<td>2.</td>
<td>Solubility range</td>
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<td>8.</td>
<td>Calcium</td>
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</table>
5. **Solubility**

It is soluble in water, very soluble in boiling water, freely soluble in glycerol, insoluble in alcohol.

6. **Identification**

   **Sample Preparation**

Dissolve 4.0 g of sample in carbon dioxide-free water prepared from distilled water and dilute to 100 mL with the same solvent. pH of the solution is 9-9.6.

- 1 mL of sample solution is added 0.1 mL of sulfuric acid and 5 mL of methanol, and then ignited. The flame has a green border.

- 5 mL of sample solution add 0.1 mL of phenolphthalein solution. The solution is red. On the addition of 5 mL of glycerol (85 per cent) the color disappears.

- Sample solution gives the reactions of sodium.

7. **Assay**

Dissolve 20 g of mannitol R in 100 mL of water R, heating if necessary, cool and add 0.5 mL of phenolphthalein solution R and neutralise with 0.1 M sodium hydroxide until a pink colour is obtained. Add 3.00 g of the substance to be examined, heat until dissolution is complete, cool, and titrate with 1 M sodium hydroxide until the pink colour reappears.

1 mL of 1 M sodium hydroxide is equivalent to 0.1907 g of Na₂B₄O₇, 10 H₂O.
8. References

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