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Reagents for stability tests
of explosives

ICS 71.100.30

Descriptors : pyrotechnics, stability, explosive atmospheres

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

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In the event of any doubts arising as to the contents,
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Reagents for stability tests of explosives

1 Scope This Japanese Industrial Standard specifies the reagents to be used for the stability tests of explosives.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 7507 *Vernier, dial and digital callipers*

JIS K 0067 *Test methods for loss and residue of chemical products*

JIS K 0970 *Piston operated micro-volumetric apparatus*

JIS K 4800 *Technical terms for explosives*

JIS K 8001 *General rule for test methods of reagents*

JIS K 8295 *Glycerol*

JIS P 3801 *Filter paper (for chemical analysis)*

3 Definitions For the main terms used in this Standard, the definitions in **JIS K 4800** apply, and the rest of the terms are as follows.

- a) **potassium iodide-starch paper for comparison test** This shall conform to the quality shown in 5.1, and be used for the sensitivity test of the potassium iodide-starch paper and purified talc powder which are not inspected. Provided that it should be stored in a dark place under strict maintenance after being kept in a closely tight container.
- b) **standard color paper for comparison test** This shall conform to the quality shown in 6.1, and be used for the sensitivity test of the potassium iodide-starch paper and purified talc powder which are not inspected. Provided that it should be stored in a dark place under strict maintenance after being kept in a closely tight container.
- c) **purified talc powder for comparison test** This shall conform to the quality shown in 7.1, and be used for the sensitivity test of the potassium iodide-starch paper and purified talc powder which are not inspected. Provided that it should be stored in a dark place under strict maintenance after being kept in a closely tight container.
- d) **time for heat resistance test** This time shall be the period of time from the insertion of the test tube for heat resistance test charged with sample in a thermostat to the instant when wet-and-dry boundary of potassium iodide-starch paper will changed into the same color concentration as that on the standard color paper.
- e) **original paper of products** This is the dyed original paper manufactured at least 1 month before, which belongs to the same lot and has not inspected yet and whose 4 sides have been eliminated by width 30 mm to 50 mm.

4 Kinds The kinds of reagents to be used for stability test of explosives shall be as follows.

- a) **Potassium iodide-starch paper for stability test of explosives**
- b) **Standard color paper for stability test of explosives**
- c) **Purified talc powder for stability test of explosives**
- d) **Blue litmus test paper for stability test of explosives**

5 Potassium iodide-starch paper for stability test of explosives

5.1 Quality The quality shall conform to the requirements in Table 1 when it is tested according to 5.2.

Table 1 Quality

Item of quality	Requirements
Appearance	White, no flaw, and nor dirt.
Sensitivity	Test time T' (s) for heat resistance test at 65 ± 0.5 °C shall fall in the following limit. $T' = T \pm 0.05T$ where, T : time of heat resistance test (s) of the potassium iodide-starch paper for comparison test

5.2 Testing method

5.2.1 Materials Materials shall be as follows.

- a) **Potassium iodide-starch paper for comparison test**
- b) **Standard color paper for comparison test**
- c) **Purified talc powder for comparison test**
- d) **SAKURA dynamite** Composed of the following.
 - Nitroglycerine 60.0 % Containing no nitroglycol
 - Nitrocellulose 2.3 % In dry base, amount of nitrogen: (12.1 ± 0.2) %
 - Potassium nitrate 29.2 % Purity is at least 99.0 %.
 - Wooden powder 8.5 % Water content is 15 % or less.
- e) **50 % glycerine solution** Prepare as follows, and preserve it in an air-tight container.

Take 20 mL of glycerine specified in **JIS K 8295**, add 20 mL of water specified in 3.6 (2) of **JIS K 8001**, and mix them.

5.2.2 Apparatus and tool

- a) **Thermostat** Constructed as shown in Fig. 1, and capable of keeping constantly temperature at 65 ± 0.5 °C.
- b) **Test tube for heat resistance test** As shown in Fig. 2.
- c) **Stop watch**