

ICS 71.080.70

CCS Y 43



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 13216-2008

Test methods for glycerine

甘油试验方法

(English Translation)

Issued on: May 28, 2008

Implemented on: December 1, 2008

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of PRC**

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1 Scope

This standard specifies the sampling method of barreled glycerol, as well as the method for the determination of its transparency, odor, color, density at 20 °C, content, chloride limits, sulfated ash, acidity or alkalinity, saponification equivalent, arsenic limits, heavy metal limits, reduction substances.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the

referenced document applies.

QB/T 2739-2005 Preparations of standard volumetric solutions of general test methods for washing products

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1

Color and luster unit for Hazen

The color of solution, each liter of which contains 1 mg of platinum (calculated as chloroplatinic acid) and 2 mg of cobalt chloride hexahydrate.

3.2

Density at 20 °C

The mass of material per unit volume at 20 °C, expressed in grams per milliliter.

4.1 General

This method is suitable for refined glycerol, which has no solid sedimentation or suspended matter in the barrel. It is also applicable to barreled refined glycerin, that has been frozen and can return to its original state after being warmed.

Samples for laboratory measurement are prepared and stored according to this method.

4.2 Principle

Insert the sampling tube from the plug hole to the bottom of the barrel. Take samples from the entire depth of the barrel. Take an equal amount of samples from each sample barrel. Combine all samples from the same batch. Mix evenly. Divide the samples into the required number of laboratory samples.

4.3.1 Sampling tube

As shown in Figure 1. It consists of two cylinders made of stainless steel or other chemical-resistant materials. The inner cylinder and the outer cylinder are closely matched. There are two rows of staggered and intermittent longitudinal grooves on each of the two cylinders. The width of the groove accounts for one quarter of the circumference of the cylinder; the length of the grooves is equally distributed over the entire length of the cylinder. The grooves on the inner cylinder and the outer cylinder can be exactly coincident or sealed, by turning the inner cylinder handle with a pointer.

The position indicated by the pointer on the scale, which is equipped on the outer cylinder,

means the relative position of the grooves on the inner cylinder and the outer cylinder. In the "filling" position, the inner and outer grooves form two rows of staggered openings, allowing samples from all depths in the barrel to enter the sampling tube at the same time.

There are holes drilled in the bottom of the inner and outer cylinders. When the pointer is in the "empty" position, the bottom holes overlap to form an opening, whilst the longitudinal groove remains sealed.

The length of the sampling tube shall be proportional to the depth of the material to be sampled; its effective volume shall be approximately 0.1% of the barrel volume.

4.3.2 Wipe plug

Match the plug hole of the barrel to be sampled.

4.3.3 Cylindrical collector

It is made of the same material as the sampling tube, but preferably glass; it is equipped with a sealing cover, has a volume of about 1.5 L, can be applied to each ton of product to be sampled.

4.4.1.1 Containers used for mixing and storing samples shall be sealed. The containers shall be kept closed during filling AND in the operation space for taking each sample.

4.4.1.2 When sampling, the container shall be shielded as much as possible, especially to prevent rain and other accidental contamination.

4.4.1.3 All instruments and containers shall be clean and dry when used.

4.4.1.4 The laboratory sample, which is obtained by dividing the mixed sample, shall completely fill the sample bottle (4.3.4).

4.4.2 Sample preparation

Insert the sampling tube (4.3.1), whose groove hole is closed, into the bottom of the barrel, through the wiper plug (4.3.2). Rotate the handle, to move the pointer to the

"filling" position. Open the longitudinal groove. Close the groove hole, after the sampling tube is full. Pull out the sampling tube. Use the wiper plug to clean the outer wall of the tube.

Insert the sampling tube, which is filled with glycerin, into the collector (4.3.3). Rotate the handle, to move the pointer to the "empty" position. Empty the sampling tube. In this way, take equal amounts of samples from each sample barrel in sequence, so that the total amount is greater than the required amount. In the interval between the two emptying operations, it must keep the collector closed.

Seal the sample container. Lie down and roll it. Quickly mix all the sample.

Immediately take about 500 g (or other required amounts) of the sample and put it into a sample bottle (4.3.4), thus preparing the required number of sets of the same laboratory sample. Tighten the stopper or sealing cap. Seal with sealing wax (or glue).

Attach the sample label, which indicates sample name, batch number, specifications, sampling date, signature of the sampler.

If the glycerin in the sample barrel has been frozen due to freezing, the barrel shall be gently heated and rolled over, to allow the glycerin to thaw and mix evenly, before sampling as described above.

5.1 Instruments

Commonly used laboratory instruments, as well as the following:

5.1.1

Nessler colorimetric tube, 50 mL.

5.1.2

Milky white electric lamp.

5.2 Procedure

Mix the glycerol sample evenly. Use vacuum or ultrasonic degassing. Take 50 mL and place it in a Nessler colorimetric tube. Observe it at room temperature, under a milky white electric lamp. Then place it in front of a white curtain to observe with reflected light. If there is no turbidity, it is judged as transparent.

6 Determination of odor

Place a small amount of glycerin sample on the back of your hand and smear it. Smell it. If there is only the special smell of glycerin and no other odor, it is judged to have no odor.

7.1 Principles

Visually compare the color of the specimen with the color of the platinum-cobalt standard colorimetric solution. Express the results in color and luster unit for Hazen (platinum-cobalt colorimetric).

7.2 Reagents

Unless otherwise stated, only reagents confirmed to be of analytical grade and distilled or deionized water or water of equivalent purity are used in the analysis.

Note: Applicable to all tests in this standard.