

## A 7 a - Slowly Dispersible Particles in Agglomerated Milk Powder

### **GEA NIRO® Method No. A 7 a**

Revised: January 2024

#### **1. Definition**

The content of slowly dispersible particles in milk powders is the number of particles still not dispersed after this procedure.

#### **2. Scope**

The method is to be used for agglomerated milk powder and for all other agglomerated dairy products.

#### **3. Principle**

The sample is evenly spread on the surface of water adjusted to a certain temperature depending on the product. The mixture is stirred manually for a short time and then filtered through a filter paper.

#### **4. Apparatus**

1. Balance, sensitivity  $\pm 0.01$  g.
2. Beaker - 250 ml.
3. Teaspoon, 40 mm high, 29 mm wide.
4. Filter paper, coarse - diameter 90 mm.
5. Büchner funnel, filter flask and water air pump.
6. Standard scale 0-5 (see Fig. 1).

#### **5. Reagents**

None.

## **6. Procedure**

1. Weigh out the correct amount of powder  $\pm 0.1$  g:  
Skimmed milk: 10 g  
Whole milk: 13 g
2. Pour 100 ml of tap water, at different temperatures, into the beaker and add the powder:  
Skimmed milk:  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$   
Whole milk:  $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$   
Lecithinated whole milk:  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
3. Using 30 complete circular stirring movements, stir with the teaspoon for 20 seconds.
4. Allow to stand for 2 minutes.
5. Using 5 complete circular stirring movements, stir for 3 seconds.
6. Filter through a Büchner funnel.

## **7. Result**

Compare with standards (0-5) using Fig. 1 immediately after filtering.

## **8. Reproducibility**

N/A

## **9. Remarks**

A sample classified as being between two standard discs is always set at the highest value. The sample is classified as '0' if no white particles are found on the filter paper.

## **10. Literature**

- GEA Niro Research Laboratory

Fig. 1 Standard scale 0-5.

