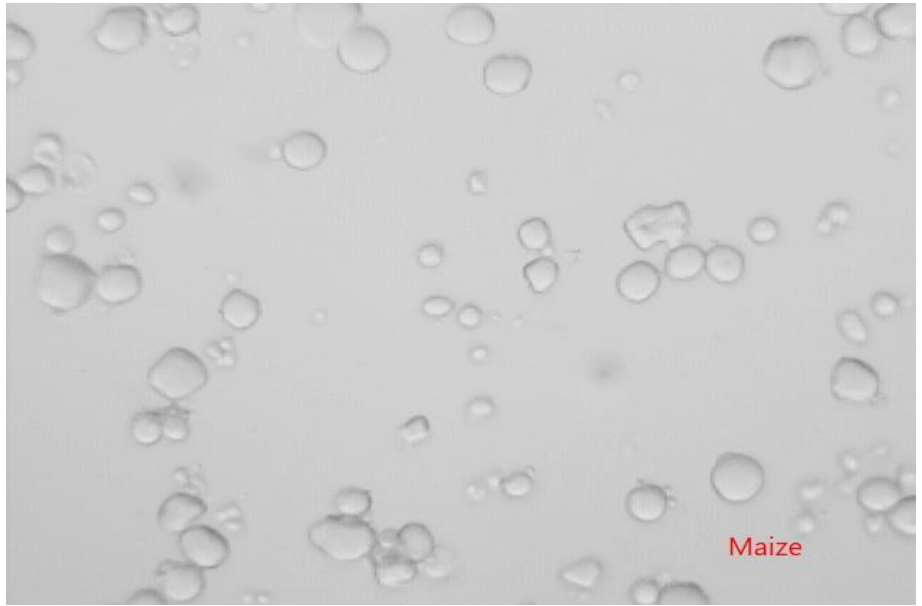
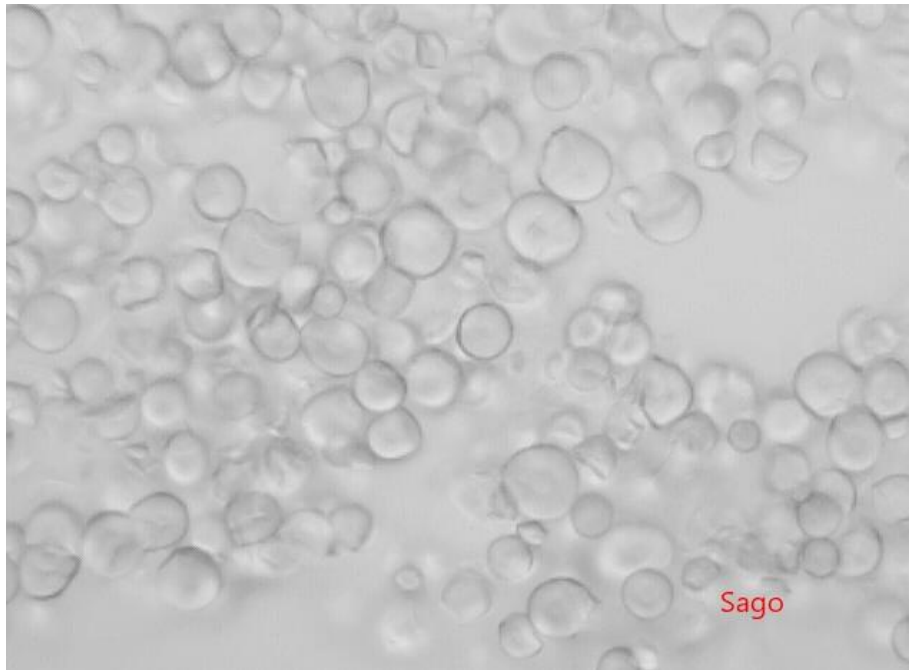


Method for Detection of Maize Starch in Tapioca Sago


Method No.	FSSAI 03.060:2022	Revision No. & Date	0.0
Scope	Scope of this method is detection of Maize Starch in Tapioca Sago by microscopic examination method.		
Caution	Clean the microscope with a clean dry cloth every day. Occasionally wet cloth dipped in IPA used. Precaution has to be taken to clean the microscopic lens immediately with a dry cloth to remove the moisture.		
Principle	Aqueous suspension of finely powdered tapioca sample shall be examined under microscope in order to detect the presence of maize starch.		
Apparatus/Instruments	LCD Digital Microscope, Mixer grinder		
Materials and Reagents	Distilled Water, Glass Slide and Slide cover slip		
Preparation of Reagents	--		
Sample Preparation	Grind the sample in mixer grinder to get in powdered form.		
Method of analysis	<ol style="list-style-type: none"> 1. Take 1g fine powdered sample in an empty beaker containing 50 mL of water. 2. Stir the content of beaker by means of glass rod to break up granules and lumps immediately. 3. Place the drop of suspension on clean microscope slide. 4. Press the glass coverslip on the drop of the suspension, taking care is that no air is trapped between glass cover slip and glass slide. 5. Remove the excess liquid on the slide by means of tissue paper/blotting paper. 6. Place the slide in the slide holder on the stage and bring it in the center. 7. Select a suitable object by rotating the objective holder and adjust the specimen in the focus by means of coarse and fine adjustment knob looking through the eyepiece. 8. Examine the slid, so prepared, under the microscope at 10x and 40x (400x) to observe the starch granules and compare with the photomicrograph of maize starch as below; 		



Maize Starch



Tapioca Starch

	 <p>(Maize + Tapioca) Starch</p> <p>9. Take the print out of resulting structure which shown through microscope and attach that print with the report.</p> <p>10. After completion of work remove the slide from the slide holder, switch "OFF" the lamp and clean the microscope with a clean dry cloth.</p>
Calculation with units of expression	---
Inference (Qualitative Analysis)	If microscopic examination of the slide matches with photomicrograph of maize starch results in detection of maize starch in Tapioca sample
Reference	IS 4706 (Part 1) : 1978
Approved by	Scientific Panel on Methods of Sampling and Analysis

Note: The test methods given in the manual are standardised/ validated/ taken from national or international methods or recognised specifications, however it would be the responsibility of the respective testing laboratory to verify the performance of these methods onsite and ensure that it gives proper results before putting these methods in to use".