

## **Working Procedures of the SAARC Foodgrain Testing Reference Laboratory**

### **Introduction:**

The Fourth Food Bank Board Meeting (Dhaka, 27 – 28 October 2010) felt that to facilitate transaction of reserves among Member States, availability of food analysis facilities would be useful. Subsequently, the Sixth Food Bank Board Meeting (Thimphu, 25-26 November 2013) identified the **Central Grain Analysis Laboratory (CGAL)** as the **SAARC Foodgrain Testing Reference Laboratory** and directed the Secretariat to request India to designate the CGAL to start with. At the Seventh Meeting of the Board (New Delhi, 10-11 November 2014), India informed that it would share the programme details and CGAL working procedures among the Member States. Accordingly, the following information has been received and circulated among the Member States:

The Central Grains Analysis Laboratory (CGAL) was set up in Department of Agriculture in 1945 and housed in Jam Nagar House, New Delhi. When the offices of the Ministry of Agriculture were shifted to Krishi Bhawan in 1956, the CGAL was also relocated from Jam Nagar to Krishi Bhawan. In its initial phase the CGAL catered to the need of analyzing samples of foodgrains mainly wheat and wheat flour, when Government used to allocate wheat from the Central Pool on a regular basis to Roller Flour Mills. Subsequently on separation of the Department of Food from the Ministry of Agriculture, the CGAL continued functioning under the Department of Food.

Earlier foodgrain samples of the imported consignments from air mail and samples from flour Mills, Citizen Central Council, Central Cooperative Societies, procurement centres under complaints, Quality Control Cells and other sources of the Department used to come for quality analysis to the CGAL. With change in mandate and functions of the Department of Food and Public Distribution, work of the CGAL has expanded.

### **Main Functions:**

The CGAL presently carries out the following functions:

- (i) Assessment of quality analysis of the samples of Central Pool foodgrains brought by Quality Control Officers of the Department from procurement centres, food storage depots, fair price shops

etc. besides foodgrains samples collected from grain Mandies for quality assessment.

- (ii) Formulation of uniform specifications of quality of foodgrains for their procurement under the Minimum Support Price (MSP) operations based on the analysis of foodgrain samples.
- (iii) Classification of paddy or rice varieties received from State Governments as grade 'A' and 'Common' varieties.
- (iv) Assessment of quality of imported and or exported foodgrains on Government account vis-à-vis contractual specifications as and when required.
- (v) Assessment of the Quality of foodgrain samples collected by Joint teams from the affected areas on the request of State Government/ UT Administrations for consideration of relaxations in uniform specifications.

### **Quality Tests done in Central Grain Analysis Laboratory:**

Physical analysis of foodgrains (wheat, paddy, rice, coarse grains) viz Moisture content. Length-breadth ratio for classification of paddy/rice varieties, Gluten, protein content and determination of falling number in wheat and wheat products (atta & maida) and protein & dehusked grain in rice and milling of paddy to ascertain the quality of rice is done in Central Grain Analysis Laboratory.

### **Capacity of CGAL to analyse foodgrain samples:**

The CGAL has capacity to analyse samples for physical parameters comprising tests for determination of moisture content, segregation of refractions like foreign matter, other food grains, damaged grains, pin point damaged, karnal bunt, slightly damaged grains, discolored grains, chalky grains, red grains, admixture of lower class, weevilled grains, 1000 kernel weight, Hectolitre weight, de-husked grains, shrivelled and broken grains, immature grains, shrunken grains etc. as per the requirement of the different commodities (Paddy, Rice, Wheat, coarse grain) and classification of paddy/rice varieties. Besides physical analysis, facilities are available at the CGAL for chemical tests such as protein estimation, gluten (dry & wet) and falling number in wheat.

**Intake of samples in CGAL:**

A representative sample of One Kg. from the foodgrain stocks from the SAARC Food Bank is required for Physical-chemical analysis. Sealed sample with separate packaging of at least 100gm grain in moisture proof polythene bag is required for determination of moisture content. A sample slip detailing address of the Storage Depot/Agency under the SAARC Food Bank, crop year, period of storage and preservation treatment given to the Commodity during storage, if any, and testing parameters required should be attached both inside and outside the bag containing samples.

**Analysis of samples at CGAL:**

Charges of analysis/testing of foodgrains samples from the SAARC Food Bank for basic tests are as under:

**Wheat:**

- i) Physical Parameters (Foreign Matter, Other foodgrains, Damaged grains, Slightly damaged grains, Shrivelled and Broken Grains, Weevilled Grains and Moisture content).
- ii) Chemical Parameters (Protein, Dry Gluten, Wet Gluten, Uric Acid, Free Fat Acidity, Total Ash and Acid insoluble Ash).

**Rice:**

- i) Physical Parameters (foreign Matter, Other foodgrains, Damaged grains/Slightly damaged grains, Discoloured grains, Chalky Grains, Red Grains, Admixture of lower class, De-husked grains and Moisture content).
- ii) Chemical parameters (Protein, Uric Acid, Free fat Acidity, Total Ash and Acid insoluble Ash).

**Charges:**

INRs. 3500/- per sample. Service Tax extra as applicable.

**Other Conditions:****Turnaround time:**

5 to 7 working days from the date of receipt of samples. For special tests such as Classification of paddy varieties, Hardness index of individual kernel, individual kernel weights, diameters of wheat grains with Single Kernel Characterizations System (SKCS) – 4100, separate communication will be required and rates will be informed accordingly. Payment is to be made through DD/NEFT in the name of DDO, Department of Food & Public Distribution, Krishi Bhawan, New Delhi.

**Address for Communication:**

The Joint Commissioner (Storage & Research)

Government of India

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Department of Food & Public Distribution

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