



EAC PROFICIENCY TESTING SCHEME

Part 2: PT Matrices available and their test parameters, and brief Notes on test methods

1. FLOUR (MAIZE FLOUR & WHEAT FLOUR)

Testproperty	Brief notes on parameter of test
Moisture	The loss of weight resulting from oven drying of flour sample at 105°C /130°C to constant weight
Crude protein	Total amount of protein in flour sample as determined using Kjeldahl method of nitrogen analysis
Crude fat	Total amount of fat in flour sample as determined using solvent extraction method after hydrolyzing the sample.
Crude fibre	The loss in weight upon incineration at 550°C of the oven dried residue remaining after sequential digestion of flour sample with H ₂ SO ₄ and NaOH
Total ash	Inorganic residue remaining upon incineration of flour sample at 550°C - 600°C
Acidity of extracted fat	Quantity of acids, essentially non-esterified fatty acids, expressed in mg of KOH per 100g of dry matter
Copper	Total content of copper in flour sample
Iron	Total content of iron in flour sample
Zinc	Total content of zinc in flour sample
Aflatoxins (maize flour)	Amount of aflatoxin B1, B2, G1, G2 and Total aflatoxin in maize flour sample

Contact details of flour PT Providing institution

Provider	Contact Person / PT Coordinator
Kenya Bureau of Standards P. O. Box 54974 – 00200 Popo Road off Mombasa Road Nairobi, KENYA <i>Tel:</i> +254 20 6948446/459/000 <i>Fax:</i> +254 20 604031/609660 <i>Web:</i> www.kebs.org	Anthony Irungu/ Anthony Irungu/ David Koech <i>Organisational unit:</i> Food and Agriculture Laboratory <i>Tel.:</i> +254 20 6948000/446/459 <i>Fax:</i> +254 20 604031/609660 <i>Email:</i> irungu@kebs.org / koechd@kebs.org

2. EDIBLE OIL

Test property	Brief notes on parameter of test
Nickel content	Total content of nickel in the oil sample
Copper content	Total content of copper in the oil sample
Moisture & volatiles content	The lost matter in the sample by weight after drying sample to constant weight.
Refractive index	A number that describes how light propagates itself through the edible oil sample medium, measured with a refractometer. This value depends on temperature.
Iodine value	Mass of halogen, expressed as iodine, absorbed by the test portion of edible vegetable oil. Iodine value is expressed as grams per 100 g of oil.
Peroxide value	Total quantity of those substances in the edible vegetable oil sample, expressed in terms of active oxygen, that oxidize potassium iodide.
Density, relative	Density of the oil sample expressed in multiples of the density of pure water at the same temperature as that of the test sample.
Acid value	Number of milligrams of potassium hydroxide required to neutralize the free fatty acids present in 1 g of fat, Acid value is expressed in milligrams per gram of edible oil sample.

Contact details of edible oil PT Providing institution

Provider	Contact Person / PT Coordinator
UNBS, Uganda National Bureau of Standards P.O. Box 6329 Plot M217 Nakawa Industrial Area Kampala, UGANDA Tel.: +256 414 505995/222367 Fax: +256 414 286123 Web: http://www.unbs.go.ug	Mr. Phenny H. Dentons Kaviiri <i>Organisational unit:</i> Chemistry Laboratory Tel.: +256 414 505995/222367 Fax: +256 414 286123 Email: kphennyd@gmail.com

3. EDIBLE SALT

Test property	Brief notes on parameter of test
Calcium	Total calcium content in sample as determined using EDTA titrimetric method or by AAS
Magnesium	Total magnesium content in sample as determined using EDTA titrimetric method or by AAS
Moisture at 105°C	The lost volatile matter in the sample by weight after drying in an Oven at 105°C to constant weight
Sulphate	Total sulphate content as determined gravimetrically
Matter –Insoluble- in water	All matter insoluble in water that is retained during filtration of salt sample solution on porosity 4 glass sintered crucible.
Chloride as NaCl	Total chloride expressed as NaCl determined by Argentometric titration
Iodate as Iodine	Determination of Total Iodate content expressed as Iodine. Determined using Thiosulphate titration

Contact details of edible salt PT Providing institution

Provider	Contact Person / PT Coordinator
<p>TBS, Tanzania Bureau of Standards P.O.Box 9524 Morogoro/Sam Nujoma Roads, Ubungo Dar es Salaam, Tanzania Tel.: +255(22)2450298/2450206/2450949 Fax: +255 22 245 0959 Web: www.tbs.go.tz</p>	<p>Ms Edith Lyimo/ Joseph Makene</p> <p><i>Organisational unit:</i> Chemistry Laboratory Tel.: +255(22)2450298/2450206/2450949 Fax: +255 22 245 0959 Email: edith_lyimo@yahoo.com / josephmakene@gmail.com</p>

4. SUGAR

Test property	Brief notes on parameter of test
Polarization	An aqueous solution of the sugar is polarized by means of a saccharimeter which is calibrated to read 100°S on the International Scale under specified condition
Conductivity ash	An aqueous sugar solution of 28g/100g is prepared and its conductivity is determined at 20°C
Moisture content	The loss of weight resulting from air drying of sample of sugar at 105°C for a period of three hours to constant weight
Colour	The colour of filtered aqueous sugar solution is measured using wavelength of 420 nm
Sulphur dioxide	The total residual Sulphur dioxide content as determined by a titration method
Water insoluble matter	An aqueous sugar to be tested is filtered through a pre-weighed membrane filter of pore size 8µm. The membrane and the insoluble matter retained on it are thoroughly washed, dried in an oven to constant weight and weighed.

Contact details of sugar PT Providing institution

Provider	Contact Person / PT Coordinator
<p>Rwanda Bureau of Standards P.O. Box: 7099 Kigali-Kicukiro, RWANDA</p> <p>Tel: +250 252-582945 Fax: +250 252-583305 Web: www.rwanda-standards.org</p>	<p>Mr. Antoine Mukunzi/Egidia Nkezabera</p> <p><i>Organisational unit:</i> Biochemical Testing Laboratories Tel.: +250 788777431/+250 788862854 Fax: +250 252-583305 Email: antoine.mukunzi@rbs.org.rw / egidia.nkezabera@rbs.org.rw</p>

5. HONEY

Test property	Brief notes on parameter of test
Moisture	AOAC (962:19)
Hydroxy methyl furfural (HMF)	AOAC (980:23)
Ash content	AOAC (920:181)
Water insoluble matter	-
Diastase activity	AOAC (958.09)
Acidity	AOAC (962.19)
Relative density	-
Zinc	-
Lead	-

Contact details of Honey PT Providing institution

Provider	Contact Person/PT Coordinator
TBS, Tanzania Bureau of Standards P.O.Box 9524 Morogoro/Sam Nujoma Roads, Ubungo Dar es Salaam, Tanzania <i>Tel.:</i> +255(22)2450298/2450206/2450949 <i>Fax:</i> +255 22 245 0959 <i>Web:</i> www.tbs.go.tz	Ms Stella Mrosso <i>Organisational unit:</i> Food Laboratory <i>Tel.:</i> +255(22)2450298/2450206/2450949 <i>Fax:</i> +255 22 245 0959 <i>Email:</i> smrossocoll@yahoo.com

6. BLACK TEA

Test property	Brief notes on parameter of test
Water extracts	-
Total Ash	-
Water Insoluble Ash	-
Alkalinity of Water Soluble Ash	-
Acid Insoluble Ash	-
Crude Fibre	-

Contact details of Black Tea Providing institution

Organisation	Contact Person
Burundi Bureau of Standards (Bureau Burundais de Normalisation) (BBN) Boulevard de la Tanzanie No 500 B.P 3535 Bujumbura, Burundi Tel: +257-22 221577 / 22 221815	<i>Mr. Eric Ruracenyeka</i> E-mail: ruraeric@yahoo.fr , ruracenyekae@bbn.bi <i>Mr. Edouard Nzambimana</i> E-mail : alinzamed@yahoo.fr

Web : www.bbn.bi	<i>Organisational unit:</i> Chemistry Laboratory
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7. ANIMAL FEED

Test property	Brief notes on parameter of test
Moisture	-
Crude Protein	-
Crude Fat	-
Crude Fibre	-
Total Ash	-
Acid Insoluble Ash	-
Calcium	-
Phosphorous	-

Contact details of PT Animal feed Providing institution

Organisation	Contact Person
Kenya Bureau of Standards P. O. Box 54974 – 00200 Popo Road off Mombasa Road Nairobi, KENYA <i>Tel:</i> +254 20 6948446/459/000 <i>Fax:</i> +254 20 604031/609660 <i>Web:</i> www.kebs.org	Anthony Irungu/ David Koech <i>Organisational unit:</i> Food and Agriculture Laboratory <i>Tel.:</i> +254 20 6948000/446/459 <i>Fax:</i> +254 20 604031/609660 <i>Email:</i> irungu@kebs.org / koechd@kebs.org

8. FERTILIZERS

Test property	Brief notes on parameter of test
Moisture	-
Ammoniacal Nitrogen	-
Total Phosphorus	-
Water Soluble Phosphate	-

Contact details of Fertilizer PT Providing institution

Provider	Contact Person
<p>TBS, Tanzania Bureau of Standards P.O.Box 9524 Morogoro/Sam Nujoma Roads, Ubungo Dar es Salaam Tanzania</p> <p><i>Tel.:</i> +255(22)2450298/2450206/2450949 <i>Fax:</i> +255 22 245 0959 <i>Web:</i> www.tbs.go.tz</p>	<p>Edith Lyimo/Joseph Makene <i>Organisational unit:</i> Chemistry Laboratory</p> <p><i>Tel.:</i> +255(22)2450298/2450206/2450949 <i>Fax:</i> +255 22 245 0959 <i>Email:</i> edith_lyimo@yahoo.com / josephmakene@gmail.com</p>