

CERTIFICATE OF ACCREDITATION

In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act. 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:

SOUTHERN AFRICAN GRAIN LABORATORY NPC Co. Reg. No.: 1997/018518/08

Facility Accreditation Number: T0116

is a South African National Accreditation System accredited Testing laboratory provided that all SANAS conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of accreditation

Annexure "A", bearing the above accreditation number for

CHEMICAL AND PHYSICAL ANALYSIS

The facility is accredited in accordance with the recognised International Standard

ISO/IEC 17025:2005

The accreditation demonstrates technical competency for a defined scope and the operation of a laboratory quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to use the relevant SANAS accreditation symbol to issue facility reports and/or certificates

> Mr R Joslas Chief Executive Officer

Effective Date: 01 November 2014 Certificate Expires 31 October 2019

102

ANNEXURE A

SCHEDULE OF ACCREDITATION

Facility Number: T0116

| Permanent Address of Laboratory: | Technical Signatories: | Ms J Nortjé (All) | |
|---|--|--|--|
| Southern African Grain Laboratory (NPC) | | Ms M Fourie (In-house method 012) | |
| Grain Building | | Ms M Hammes (Chemical) | |
| 477 Witherite Road | | Ms A de Jager (Nutrients & Contaminants) | |
| The Willows | | Ms W Louw (In-House Methods 001, 002, | |
| 0040 | | 003, 010, and 026) | |
| | | Ms D Moleke (Rheological) | |
| | | Ms I Terblanche (Rheological) | |
| | | Ms H Meyer (Chemical, Nutrients, | |
| | | Contaminants & Grading) | |
| | | Ms J Kruger (Chemical, excluding In-house | |
| | | method 012) Mr L Badenhorst (Grading) | |
| | | | |
| | Ms P Modiba (Chemical) | | |
| | | Ms M Motlanthe (In-house method 001, 003) | |
| | | | |
| Postal Address: | Nominated Representative: | Ms S du Preez | |
| Postnet Suite # 391 | | | |
| Private Bag X 1 | Management Representative: | Ms W Louw | |
| The Willows 0041 | | | |
| T. I. (010) 007 1010 | N. N. | 24 | |
| Tel: (012) 807-4019 | Issue No.: | 24 | |
| Fax: (086) 216-7672 | Date of Issue: | 04 March 2015 | |
| E-mail: info@sagl.co.za | Expiry Date: | 31 October 2019 | |
| Materials / Products Tested | Type of Tests / Properties Measured, Range of | Standard Specifications, | |
| | Measurement | Equipment / Technique Used | |
| CHEMICAL | Measurement | Equipment / Technique Used | |
| | | | |
| CHEMICAL Ground Barley | Measurement Moisture (Oven Method) | Analytical EBC Method 3.2, Latest | |
| | | | |
| Ground Barley | Moisture (Oven Method) | Analytical EBC Method 3.2, Latest Edition (2hour; 130°C) | |
| Ground Barley Cereal and cereal products specifically- | Moisture (Oven Method) Moisture (Oven Method) | Analytical EBC Method 3.2, Latest Edition (2hour; 130°C) ICC Std No.110/1, Latest Edition | |
| Ground Barley Cereal and cereal products specificallywheat, rice, (hulled paddy), barley, millet, rye | Moisture (Oven Method) Moisture (Oven Method) | Analytical EBC Method 3.2, Latest Edition (2hour; 130°C) ICC Std No.110/1, Latest Edition (90 min; 130°C) | |
| Ground Barley Cereal and cereal products specifically- | Moisture (Oven Method) Moisture (Oven Method) | Analytical EBC Method 3.2, Latest Edition (2hour; 130°C) ICC Std No.110/1, Latest Edition | |
| Ground Barley Cereal and cereal products specificallywheat, rice, (hulled paddy), barley, millet, rye and oats as grains, semolina and flour | Moisture (Oven Method) Moisture (Oven Method) | Analytical EBC Method 3.2, Latest Edition (2hour; 130°C) ICC Std No.110/1, Latest Edition (90 min; 130°C) (2 hour, 130°C) | |
| Ground Barley Cereal and cereal products specificallywheat, rice, (hulled paddy), barley, millet, rye and oats as grains, semolina and flour Flour, semolina, bread, all kind of grains and | Moisture (Oven Method) Moisture (Oven Method) | Analytical EBC Method 3.2, Latest Edition (2hour; 130°C) ICC Std No.110/1, Latest Edition (90 min; 130°C) (2 hour, 130°C) AACCI 44-15.02, Latest Edition | |
| Ground Barley Cereal and cereal products specificallywheat, rice, (hulled paddy), barley, millet, rye | Moisture (Oven Method) Moisture (Oven Method) | Analytical EBC Method 3.2, Latest Edition (2hour; 130°C) ICC Std No.110/1, Latest Edition (90 min; 130°C) (2 hour, 130°C) | |

Original Date of Accreditation: 01 November 1999 Page 1 of 3

Field Manager

ANNEXURE A

Facility No.: T0116 Date of Issue: 04 March 2015 Expiry Date: 31 October 2019

| Materials / Products Tested | Type of Tests / Properties Measured, Range of Measurement | Standard Specifications, Equipment / Technique Used |
|---|---|--|
| All flours, cereal grains, oilseeds and animal feeds | Nitrogen and protein (Combustion method - Dumas) | AACCI 46-30.01, Latest Edition |
| Food stuff | Dietary fibre (total) | In-house method 012 |
| Food stuff and feeds | Carbohydrates (by difference) (calculation) Energy value (calculation) Total digestible nutrition value (calculation) | SOP MC 23 |
| Food stuff and feeds | Determination of ash | In-house method 011 |
| Wheat kernels | Moisture (Oven method) | Government Gazette Wheat Grading Regulation, Latest Edition (72 hour, 103°C) |
| Flours of grains, e.g. barley, oats, triticale, maize, rye, sorghum and wheat; oilseeds like soybeans and sunflower, feeds and mixed feeds and foodstuffs | Crude Fat (Ether extraction by Soxhlet) | In-house method 024 |
| Meal and flour of wheat, rye, barley, other grains, starch containing and malted products | Falling number | ICC No 107/1, Latest Edition |
| NUTRIENTS & CONTAMINANTS | | |
| Vitamin fortified food and feed products and fortification mixes grain based | Vitamin A as all trans Retinol (Saponification) (HPLC) | In-house method 001 |
| Vitamin fortified food and feed products and fortification mixes grain based | Thiamine Mononitrate (HPLC) Riboflavin (HPLC) Nicotinamide (HPLC) Pyridoxine Hydrochloride (HPLC) | In-house method 002 |
| Vitamin fortified food and feed products and fortification mixes grain based | Folic Acid (HPLC) | In-house method 003 |

Original Date of Accreditation: 01 November 1999

Page 2 of 3

Field Manager

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Facility No.: T0116 Date of Issue: 04 March 2015 Expiry Date: 31 October 2019

| Materials / Products Tested | Type of Tests / Properties Measured, Range of Measurement | Standard Specifications, Equipment / Technique Used |
|--|---|---|
| Grain based food and feed products (fortified and unfortified) and fortification mixes | Total sodium (Na) Total Iron (Fe) Total zinc (Zn) | In-house method 010 |
| Food and feed | Multi-Mycotoxin: - Aflatoxin G ₁ , B ₁ , G ₂ , B ₂ and total - Deoxynivalenol (DON), 15-ADON - Fumonisin B ₁ , B ₂ , B ₃ - Ochratoxin A - T2, HT-2 | In-house method 026 |
| GRADING | - Zearalenone | |
| Maize | Defective kernels (white maize/yellow maize) | Government Gazette Maize Regulation, Latest Edition |
| Cereal as grains (wheat, barley, rye and oats) | Hectolitre mass (Kern222) | ISO 7971-3, Latest Edition |
| Wheat | Screenings | Government Gazette Wheat Grading Regulation, Latest Edition |
| RHEOLOGICAL | | |
| Wheat flour | Alveograph (Rheological properties) | ICC No 121, Latest Edition |
| Flours | Farinograph (Rheological properties) | AACCI 54.02, Latest Edition (Rheological behaviour of Flour Farinograph: Constant Flour Weight procedure) |
| Hard, soft and durum wheat, (flour and whole wheat flour) | Mixograph (Rheological properties) | Industry Accepted Method 020 (based on AACCI 54-40.02, Latest Edition Mixograph Method) |

Original Date of Accreditation: 01 November 1999 Page 3 of 3

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

Field Manager