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|  | <b>ACCREDITATION<br/>DOCUMENT</b> | <b>F-06/02<br/>Issue Date: 18/08/2020<br/>Rev. No: 09<br/>LAB 085</b> |
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## **Accreditation No: LAB 085**

### **Awarded to**

**M/s Defence Science & Technology Organization (DESTO).  
Food Health & Safety Analysis Lab (FHSAL)  
34- 37 PNH Lines, Karachi Cantt, Pakistan.**

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **06-04-2015** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2017**.

The accreditation requires regular surveillance, and is valid until **14-03-2027**.

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed measurements/tests.

**PAKISTAN NATIONAL ACCREDITATION COUNCIL**

**30-12-2024**

Date

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Director General

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### Testing Laboratory.

**Accreditation Scope of M/s Defence Science & Technology Organization (DESTO), Food Health & Safety Analysis Lab (FHSL), 34- 37 PNH Lines, Karachi Cantt, Pakistan.**

**Permanent laboratory premises**

| Materials/Products tested                            | Testing field (e.g. environmental testing or mechanical testing) | Types of test/ Properties measured  | Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference   |
|--|--|---|---|
| Food and agri products (Grains, spices and nuts etc) | Food Testing   | Aflatoxin B1, Aflatoxin B2, Aflatoxin G1, Aflatoxin G2<br>Total Aflatoxin | Inhouse SOP #: BRC/17025/WI-1.45<br>HPLC METHOD SIST EN 14123 /<br>AOAC 991.31  |
| Food / seed material                                 | Food Testing   | GMOs Testing (Qualitative Analysis by GMO event CP4- EPSPS (in soy)       | Inhouse SOP #: BRC/MBD-17025/WI-2.3<br>ISO 21571:2005 (E) (Modified) for Nucleic acid extraction<br><br>Inhouse SOP #: BRC/MBD-17025/WI-2.5<br>ISO 21569:2005 (E) (Modified) for Qualitative PCR Analysis |
| Food / Plant material Food                           | Food Testing   | GMOs Testing (Qualitative Analysis by GMO event Cry1A(b))                 | Inhouse SOP #: BRC/MBD-17025/WI-2.3<br>ISO 21571:2005 (E) (Modified) for Nucleic acid extraction<br><br>Inhouse SOP #: BRC/MBD-17025/WI-2.5<br>ISO 21569:2005 (E) (Modified) for Qualitative PCR Analysis |
| Food / Plant material Food                           | Food Testing   | GMOs Testing (Qualitative Analysis by GMO event Bt11)                     | Inhouse SOP #: BRC/MBD-17025/WI-2.3<br>ISO 21571:2005 (E) (Modified) for Nucleic acid extraction<br><br>Inhouse SOP #: BRC/MBD-17025/WI-2.5<br>ISO 21569:2005 (E) (Modified) for                          |

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|   |               |  | Qualitative PCR Analysis  |
| Food / Plant material<br>Food   | Food Testing  | GMOs Testing<br>(Qualitative Analysis<br>by GMO event<br>MON810) | Inhouse SOP #: BRC/MBD-17025/WI-2.3<br>ISO 21571:2005 (E) (Modified) for<br>Nucleic acid extraction<br><br>Inhouse SOP #: BRC/MBD-17025/WI-2.5<br>ISO 21569:2005 (E) (Modified) for<br>Qualitative PCR Analysis   |
| Food / Plant material<br>Food   | Food Testing  | GMOs Testing<br>(Qualitative Analysis<br>p35S, tNOS)             | Inhouse SOP #: BRC/MBD-17025/WI-2.3<br>ISO 21571:2005 (E) (Modified) for<br>Nucleic acid extraction<br><br>Inhouse SOP #: BRC/MBD-17025/WI-2.5<br>ISO 21569:2005 (E) (Modified) for<br>Qualitative PCR Analysis   |
| Food (Grains, Spices,<br>Nuts etc)  | Food Testing  | Total Aflatoxins   | AOAC 19 <sup>th</sup> Edition 991.31 / Afla Test<br>Instruction Manual<br>Method # 4.6 page # 28-29<br>Method # 4.5 page # 26-27<br>Method # 4.7 page 30<br>Method # 4.21 page 49<br>Method # 4.23 page 52<br>Inhouse SOP #: BRC/17025/WI-1.34,1.35,1.36,1.37 |
| Betel nut   | Food Testing  | Total Aflatoxins   | Afla Test Instruction Manual Method #<br>4.18 page 46<br>In house validated method.<br>Inhouse SOP #: BRC/17025/WI-1.44   |
| Cereal, ginger  | Food Testing  | Total Aflatoxins   | Inhouse SOP #: BRC/17025/WI-1.42<br>ELISA kit method  |
| Wheat, corn Germ<br>Meal, Corn Bran,<br>Dried Distillers Grains<br>& Rough Rice | Food Testing  | Total Aflatoxins   | Afla Test Instruction Manual Method #<br>4.35 page 68<br>Inhouse SOP #: BRC/17025/WI-1.43   |
| Water (drinking & sea<br>water)   | Water Testing | pH   | AOAC, 19 <sup>th</sup> Ed.(2012) ,973.41, (11.1.03),<br>Pg # 2.<br>pH meter<br>Inhouse SOP #: BRC/17025/WI-1.27   |

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|   |              | Chloride     | Titration method with Silver Nitrate<br>Water & waste Analysis, S.N. Kaul<br>Ashutosh Gauth, 2002 page 54.<br>pH meter<br>Inhouse SOP #: BRC/17025/WI-1.26   |
|   |              | Hardness     | Titrametric method AOAC, 19 <sup>th</sup><br>Ed.(2012), 973.52, (11.1.21)<br>Inhouse SOP #: BRC/17025/WI-1.25  |
|   |              | TDS          | Drying oven Method AOAC, 19 <sup>th</sup><br>Ed.(2012), 920.193, (11.1.09) Modified<br>and via Multimeter<br><br>Inhouse SOP #: BRC/17025/WI-1.24,<br>1.31   |
|   |              | Conductivity | Multimeter / AOAC Official Method of<br>Analysis, 19 <sup>th</sup> Edition (2012) 973.40,<br>(11.01.2).<br>Inhouse SOP #: BRC/17025/WI-1.24,<br>1.31   |
| Cereal Based Products<br>(Wheat Flour, Bran,<br>Rice, Bread etc.) | Food Testing | Moisture     | Oven Drying<br>Method<br>AOAC Official Method of Analysis, 19 <sup>th</sup><br>Edition (2012) 925.10, (32.1.03).<br>Inhouse SOP #: BRC/17025/WI-1.1<br><b>Modified</b><br>Hot Air Oven, Analytical Balance   |
|   |              | Fat          | Soxhlet Apparatus<br>Method<br>AOAC Official Method of Analysis 19 <sup>th</sup><br>Edition (2012) 945.38 (32.2.01) (F<br>4.5.01) (920.39). <b>Modified</b><br>Inhouse SOP #: BRC/17025/WI-1.3<br>Soxhlet Apparatus<br>Hot Air Oven, Water bath, Analytical<br>Balance |
|   |              | Ash          | Muffle furnace method<br>AOAC Official Method of Analysis, 19 <sup>th</sup><br>Edition (2012)) 923.03, (32.1.05)<br>Inhouse SOP #: BRC/17025/WI-1.2<br>Muffle Furnace, Analytical Balance  |

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|             |              | Protein(By Nitrogen Estimation)                          | Macro Kjeldhal Method<br>AOAC Official Method of Analysis, 19 <sup>th</sup> Edition (2012) 920.87 (32.1.22).<br><br>AOAC Official Method of Analysis, 19 <sup>th</sup> Edition (2012) 991.20 (33.2.11)<br><b>Modified</b><br>BRC/17025/WI-1.4<br>Kjeldhal Apparatus, Analytical Balance |
|             |              | Total Carbohydrate in cereal food (by difference method) | Chapter 10 page # 151 Food Analysis 4 <sup>th</sup> Edition 2010, by S.SUZANNE NIELSEN<br>Inhouse SOP #: BRC/17025/WI-1.5   |
|             |              | Total Energy value / Calorific Value                     | Chapt 1 page 9, "The Composition of Foods" MacCance & Widdowson's, 7 <sup>th</sup> Ed.<br>Inhouse SOP #: BRC/17025/WI-1.6   |
| Milk powder | Food Testing | Moisture   | PSI Standards: 363-82<br>Inhouse SOP #: BRC/17025/WI-1.22   |
|             |              | Ash  | Muffle furnace method<br>AOAC Official Method of Analysis, 19 <sup>th</sup> Edition (2012)) 923.03, (32.1.05)<br>Inhouse SOP #: BRC/17025/WI-1.23<br>Muffle Furnace, Analytical Balance   |

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