# Seed Analysis Card

Lab Test No.: …………

Kind:

Date of Registration:

Weight of sample: gm.

Balance Name:

Variety:

Class:

Lot no./Mark:

Test desired**:** Germination/Purity/Moisture/Other Determination/1000 Seed Wt./ Seed Health/TZ Test/Vigour Test

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PHYSICAL PURITY TEST Weight of working sample (g) (a) Original: ….......... (b) Final: …………… | | | | | | | | |
| Components | | **Grams** | **%** | **Grams** | **%** | **Average %** | **Kind and no. of admixtures** | **Remarks** |
| Pure Seed | |  |  |  |  |  |  |  |
| Other Crop Seed | |  |  |  |  |  |  |  |
| Weed seed | Common |  |  |  |  |  |  |  |
| Objectionable |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |
| Inert Matter | |  |  |  |  |  |  |  |
| **Total** | |  |  |  |  |  | Analysed by: ………………… Date: …………  Unit In-charge: ……………… Date: ………… | |

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| **MOISTURE TEST** | | | | | | **OTHER SEED DETERMINATION TEST** | | **1000 SEED WEIGHT TEST (gm.)** | | | | | | | | | | | |
| Methods | **i** | **ii** | **iii** | Average % | Remarks | **Components** | **No/kg** | **Test 1 (8 replications)** | | | | | | **Test 2 (16 replications)** | | | | | |
| By Oven |  |  |  |  |  | Other Distinguishable Variety |  | 100 seeds | x | x2 | 100 seeds | x | x2 | 10 seeds | X | x2 | 100 seeds | x | x2 |
| By Meter |  |  |  |  |  | Other Crop Seed |  | R1 |  |  | R5 |  |  | R9 |  |  | R13 |  |  |
| R2 |  |  | R6 |  |  | R10 |  |  | R14 |  |  |
| R3 |  |  | R7 |  |  | R11 |  |  | R15 |  |  |
| Analysed by: …………………  Date: ………………………... | | | | | | Weed Seed |  | R4 |  |  | R8 |  |  | R12 |  |  | R16 |  |  |
| ∑x = | | | S.D = | | | ∑x = | | | S.D = | | |
| ∑x2= | | | C.V= | | | ∑x2= | | | x ± 2SD = ………. to ….............. | | |
| Unit In-charge: ………………………  Date:………………………………… | | | | | | Analysed by: ………….  Date …………………  Unit In-charge: ………  Date:…………………… | | X= | | | 1000 seed wt.=  X × 10 = …………. gm. | | | X= | | | X = | | |
| Variance = | | | Variance = | | | X × 10 = ………… gm | | |
| Analysed by: ………………. Date: ………………………. Unit In charge: ………………… Date: ……………………… | | | | | | | | | | | |

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| **SEED HEALTH**  …………………. Method   |  |  |  |  | | --- | --- | --- | --- | | **Description** | **Common** | **Designated** | **Total** | | Name of disease observed |  |  |  | | Causal Organism |  |  |  | | % of infection |  |  |  |   Analyzed by……………………. Date…………………………  Unit In-charge…………………... Date ……………………… | **VIGOUR TEST**  ………………….. METHOD   |  |  |  | | --- | --- | --- | | **LAB NO./VARIETY/LOT NO.** | **G% BEFORE VIGOUR TEST** | **G% AFTER VIGOUR TEST** | |  |  |  | | Analyzed by: ………………… Date: ………………….  Unit In-charge: ………………... Date: ………………... | | | |
| VIABILITY TEST   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Categories** | **rep 1** | **rep2** | **rep3** | **rep 4** | **Total** | **Average** | | Viable |  |  |  |  |  |  | | Non-viable |  |  |  |  |  |  | | Hard |  |  |  |  |  |  | | **Total** |  |  |  |  |  |  |   Analyzed by……………………. Date………………………  Unit In-charge…………………. Date ……………………… |

**Germination Test**

Lab Test No.: …………

Germination test begun: Kind:

Substratum: Variety:

Temperature: °C Production year:

Special treatment: No. of seeds tested: 100×4 Rep = (400 seeds)

Quantity of Lot: Balance Name:

Seed placed by: No of Germinator: Name of Oven:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date of count** | | | | Replications | | | | | | | | | | **Tolerance** | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Total | **Average %** | For repeated tests | Two |
| **Normal seedlings** | ………………..First count … Days | | |  |  |  |  |  |  |  |  |  |  | Maximum difference=  Maximum Tolerated range=  Maximum difference=  Maximum Tolerated range= |  |
| ………………..Final count … Days | | |  |  |  |  |  |  |  |  |  |  |
| **Total** | | |  |  |  |  |  |  |  |  |  |  |
| **Abnormal Seedlings** | **Damage seedlings** | Cotyledon/shoot | a) Cracked |  |  |  |  |  |  |  |  |  |  |
|  | b) Completely separated |  |  |  |  |  |  |  |  |  |  |
| Badly cracked and splitted | a) Hypocotyls |  |  |  |  |  |  |  |  |  |  |
|  | b) Epicotyls |  |  |  |  |  |  |  |  |  |  |
|  | c) Cotyledons |  |  |  |  |  |  |  |  |  |  |
|  | Damaged |  |  |  |  |  |  |  |  |  |  |
| Coleoptile | Broken |  |  |  |  |  |  |  |  |  |  |
|  | Split |  |  |  |  |  |  |  |  |  |  |
|  | Stunted |  |  |  |  |  |  |  |  |  |  |
| Primary roots | Missing |  |  |  |  |  |  |  |  |  |  |
|  | Retarded |  |  |  |  |  |  |  |  |  |  |
| Primary roots | Spindly |  |  |  |  |  |  |  |  |  |  |
|  |  |
| **Deformed or Unbalance Seedlings** |  | Hypocotyl |  |  |  |  |  |  |  |  |  |  |
| Short and thick | Mesocotyl |  |  |  |  |  |  |  |  |  |  |
|  | Epicotyl |  |  |  |  |  |  |  |  |  |  |
|  | Hypocotyl |  |  |  |  |  |  |  |  |  |  |
| Long, twisted or spiraled | Epicotyl |  |  |  |  |  |  |  |  |  |  |
|  | Mesocotyl |  |  |  |  |  |  |  |  |  |  |
|  | Coleoptile |  |  |  |  |  |  |  |  |  |  |
| Curled cotyledons | |  |  |  |  |  |  |  |  |  |  |
| Discolored or necrotic cotyledons | |  |  |  |  |  |  |  |  |  |  |
| Split coleoptile | |  |  |  |  |  |  |  |  |  |  |
|  | Yellow or white |  |  |  |  |  |  |  |  |  |  |
| Seedlings | Spindly or glassy |  |  |  |  |  |  |  |  |  |  |
| **Decayed Seedlings** | | | |  |  |  |  |  |  |  |  |  |  |  | |
| **Total** | | | |  |  |  |  |  |  |  |  |  |  |
| **Ungerminated Seed** | Fresh | | |  |  |  |  |  |  |  |  |  |  |
| Hard | | |  |  |  |  |  |  |  |  |  |  |
| Dead | | |  |  |  |  |  |  |  |  |  |  |
| Total | | |  |  |  |  |  |  |  |  |  |  |
| **Grand total** | | | |  |  |  |  |  |  |  |  |  |  |

Seed Analyst: …………. Unit In-charge: ………….

Date: …………. Date: ………….

# Sample Detail Form

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Laboratory Test Number:  Date sample sent: | | | | | | Date of sample received:  Remarks: | | | | | |
| **To be filled up by Sender**  Species/kind: ………………………  Mark (√) class of seed (Certification system): | | | | | | | | | | | |
|  | Breeder seed | Foundation seed | | | Certified seed | | | Improved seed | | | Any other (specify): ……… |
|  | | | | | | | | | | | |
| Mark (√) class of seed (Truthful labelling): | | | | | | | | | | | |
|  | Breeder seed | Source seed | | Label seed | | | Improved seed | | | Any other (specify) : ……… | |
| Mark (√) required seed analysis | | | | | | | | | | | |
| (a) Purity | | | (d) Moisture content | | | | | | (g) Any other (please specify): ……………………… | | |
| (b) Germination | | | (e) Seed health | | | | | |  | | |
| (c) Other Seed Determination | | | (f) 1000 seed weight | | | | | |  | | |
| Name and address of sender: …………………………………  Signature of the sender: …………………… Date signed: ……………………………… | | | | | | | | | | | |
| Lot number or Identification: ……………………  Weight of lot (size): ………… (kg) | | | | | | No. of bags or other containers: …………  Container size: ………… (kg) | | | | | |
| Number of primary samples taken (N): …………………  If seed treated (By chemical), Name: ………………………… Dose: …………………………  Production year: ……………………. | | | | | | | | | | | |
| Date of sampling: …………………… Place of sampling…………………….  Sampled by: …………………………… Signature of the sampler……………….  Remarks, if any: ………………………………………………………… | | | | | | | | | | | |

# Seed Lot Test Report

Sample Received: ................. Kind/Crop: *.....................*

Test No: ................. Variety: ........................

Lot No/Mark: ............... Class: .....................

Test begun: ....................... Sender's name: ......................

Test completed date: .......................... Address: ....................

Quantity of the seed Lot: .................... Method of Germination Testing: ...................

Date of Sampling: ........................... Temperature: ..................

Sampled by: ................................ Address of Sampler: ...................

Weight of sample: ................. Collection: .......................

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Seed Analysis (in Percentage)** | | | | | | | | |
| Pure Seed | Other Crop Seed | Weed Seed | | Inert Matter | Moisture | Germination | 1000 Seed Wt. (gm) | Remarks/Special Treatment |
|  |  |  | |  |  |  |  |  |
| **Other Seeds Determination by Number Test (including no. of OCS, WS found in purity analysis)** | | | | | | | | |
| Other Crop Seed /1000 grams  Kind/No: 0 | | | Other Distinguishable Variety (ODV) /1000 grams  Kind/No.: 0 | | | | | Weed Seed /1000 grams  Kind/No.: 0 |

Hard: Fresh: Abnormal: Dead:

**Remarks:**

**Sample received: Treated/un-treated**

**Moisture Tested by: Oven Method (Fine Grinding Temperature at 1300-1330 C for 4 hours)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Good Seed |  | Cultivar name mentioned in sample is not appropriate |
|  | Other quality attributes are good but low Germination(Truthful labeling/Certification). |  | Submitted sample is not enough for complete analysis |
|  | Further cleaning is necessary to meet minimum seed Standards in case of WS (weed seed) |  | Highly damaged by insects. |
|  | Further cleaning is necessary to meet minimum seed Standards in case of OSD ( other crop seed) |  | Highly diseased and moldy sample. |
|  | Further cleaning is necessary to meet minimum seed Standards in case of IM (Inert matter) |  | Further seed drying is necessary to meet minimum seed Standards for Moisture. |

**Note:**

1. Results included in this report are based on Seed Lot inspection and sampling from the authorize sampler of this Laboratory. Hence, submitted sample represents whole seed lot.

2. Quality of seed entirely depends upon condition of storage, probable fluctuation of seed moisture, insects and pest damage during storage even though the result is satisfactory during the laboratory testing. So, seed producers, traders and buyers are responsible for protecting the quality of seed from all these adverse climatic condition during storage. Laboratory will not responsible, if otherwise.

3. Seed Lot Test reports are only valid for 6 months from the date of laboratory testing, if storage condition of seed lot is appropriate, and revalidation is must thereafter.

**Report prepared by: Verified by: Authorize Signature**

Signature: .................................. Signature: .................................... Signature: .........................

Name: ……………. Name: ………………. Name: …………….

Designation: ………. Designation: ……………… Designation: …………….

Date: ............... Date: .......................... Date: ..........................

# Seed Sample Test Report

Sample Received: ................. Kind/Crop: *.....................*

Test No: ................. Variety: ........................

Lot No/Mark: ............... Class: .....................

Test begun: ....................... Sender's name: ......................

Test completed date: .......................... Address: ....................

Quantity of the seed Lot: .................... Method of Germination Testing: ...................

Date of Sampling: ........................... Temperature: ..................

Sampled by: ................................ Address of Sampler: ...................

Weight of sample: ................. Collection: .......................

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Seed Analysis (in Percentage)** | | | | | | | | |
| Pure Seed | Other Crop Seed | Weed Seed | | Inert Matter | Moisture | Germination | 1000 Seed Wt. (gm) | Remarks/Special Treatment |
|  |  |  | |  |  |  |  |  |
| **Other Seeds Determination by Number Test (including no. of OCS, WS found in purity analysis)** | | | | | | | | |
| Other Crop Seed /1000 grams  Kind/No.: 0 | | | Other Distinguishable Variety (ODV) /1000 grams  Kind/No.: 0 | | | | | Weed Seed /1000 grams  Kind/No.: 0 |

Hard: Fresh: Abnormal: Dead:

**Remarks:**

**Sample received: Treated/un-treated**

**Moisture Tested by: Oven Method (Fine Grinding Temperature at 130°-133°C for 4 hours)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Good Seed |  | Cultivar name mentioned in sample is not appropriate |
|  | Other quality attributes are good but low Germination (Truthful labeling/Certification). |  | Submitted sample is not enough for complete analysis |
|  | Further cleaning is necessary to meet minimum seed Standards in case of WS (weed seed) |  | Highly damaged by insects. |
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**Report prepared by: Verified by: Authorize Signature**

Signature: .................................. Signature: .................................... Signature: .........................

Name: ……………. Name: ………………. Name: …………….

Designation: ………. Designation: ……………… Designation: …………….

Date: ............... Date: .......................... Date: ........................