ISTA
Seed Quality Assurance

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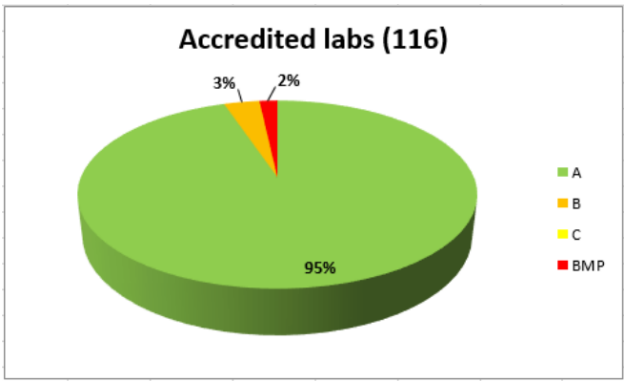
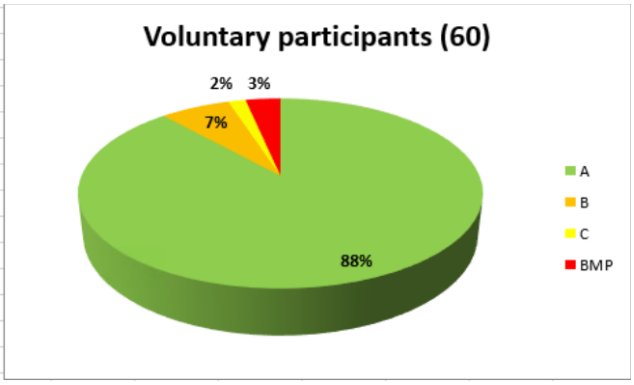
Summary report: PT 24-3 L.sat

Species: *Lactuca sativa* **Scope:** PUR, OSD, GER

PURITY Ratings **Total number of participants = 176**





Means and Standard Deviation
of the obligatory accredited participants
calculated for the category of pure seed

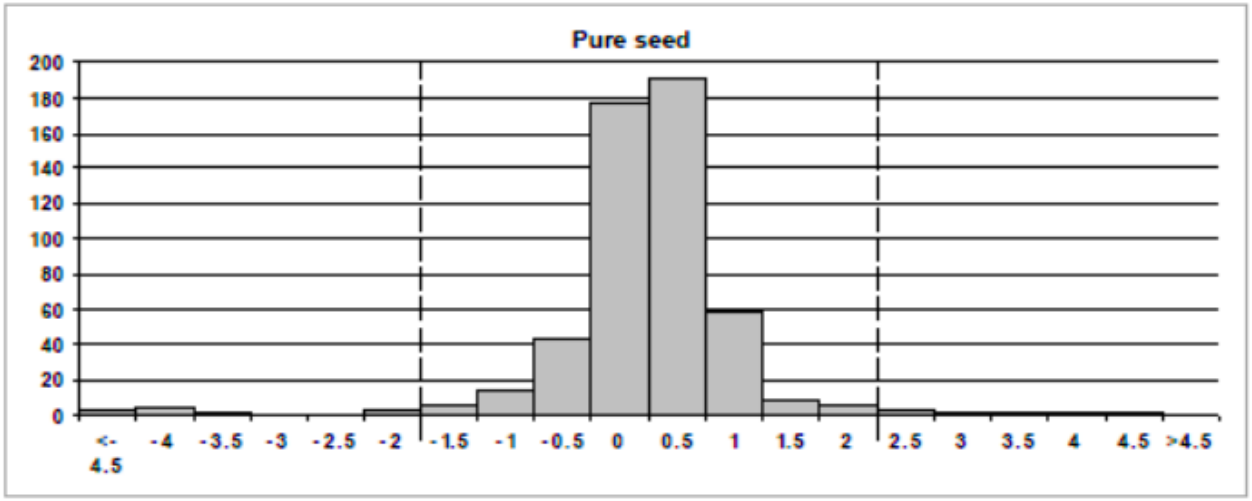
Categories	Mean Values %			Standard Deviation		
	Lot 1	Lot 2	Lot3	Lot 1	Lot 2	Lot 3
Pure seed	**99.7**	**99.3**	**99.4**	**0.12**	**0.17**	**0.15**
Other seed	0.3	0.7	0.4	-	-	-
Inert matter	TR	TR	0.2	-	-	-

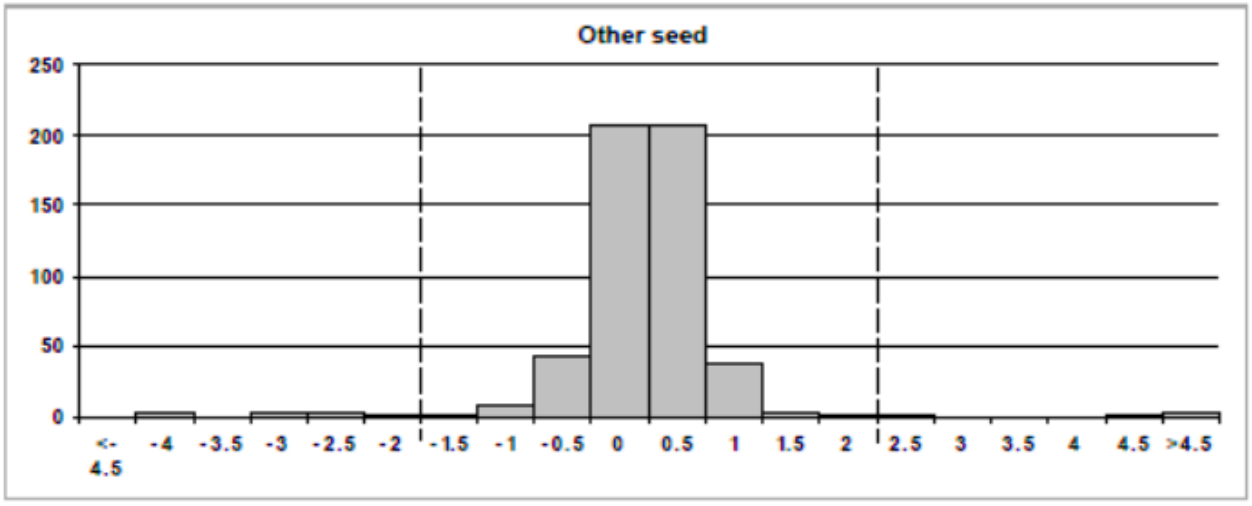
Z-score Distribution

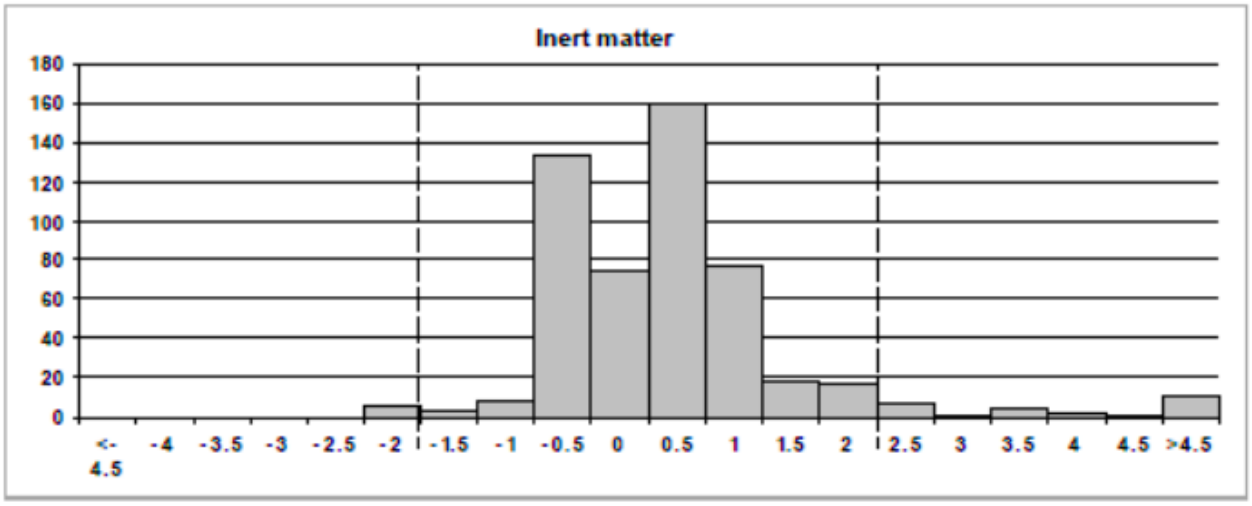
Proficiency Test Report – Test Round 24-3 L.sat

Species : Lactuca sativa **Scope:** Purity

The following histograms show the frequency distributions of all participants Z-Scores for the relevant components, i.e. **Pure seed** and **Inert matter** and **Other seed**. The Z-Scores from all three samples are included in each histogram. For further explanations, please refer to the document 'The ISTA Proficiency Test Programme'

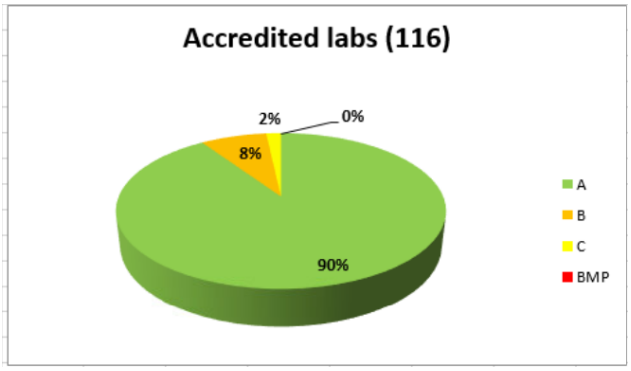


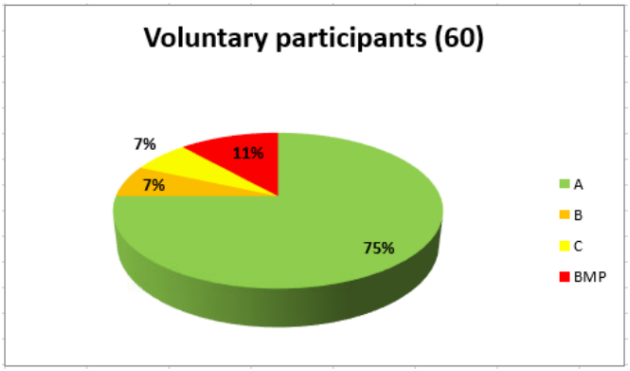




OSD Ratings

Total number of participants = 176





Retrieval rates

Proficiency Test Report - Test round 24-3 L.sat

Species: *Lactuca sativa* **Scope:** Other Seed Determination

Average of seeds retrieved and identified correctly

The following table shows the retrieval rates of each species added by the test leader prior to sample dispatch. Every species that was added is assigned a value based on the actual retrieval rate of all seeds added. Thresholds are as follows:

>=90 % -> 3
>=85 % -> 2
<85 % -> 1

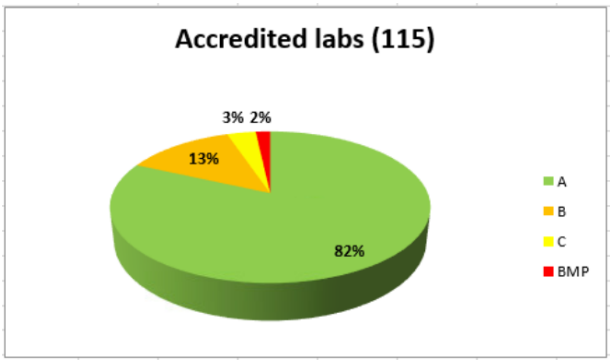
This score is multiplied with the number of seeds your laboratory reported and identified correctly. The percentage of retrieved and identified seeds is then determined and does define the in-round rating. The thresholds are as follows:

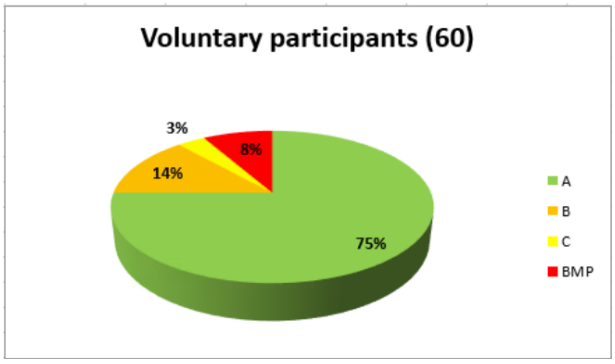
>=90 % -> A
>=80 % -> B
>=70 % -> C
<70 % -> BMP

For further details please refer to the document: "The ISTA Proficiency Test Programme".

Lot #		Species name	# of seeds added	Average # of seeds found	Retrieval rate [%]	Assigned factor
Lot 1						
	1	*Amaranthus retroflexus*	2	1.8	91.8	3
	2	*Apium graveolens*	3	2.6	88.0	2
	3	*Dactylis glomerata*	4	3.3	82.9	1
	4	*Ocimum basilicum*	2	1.7	87.3	2
Lot 2						
	1	*Anethum graveolens*	3	2.7	89.4	2
	2	*Chenopodium quinoa*	3	2.7	90.5	3
	3	*Cynodon dactylon*	4	2.9	71.3	1
	4	*Nigella sativa*	2	1.8	87.8	2
Lot 3						
	1	*Camelina sativa*	2	1.6	81.5	1
	2	*Centaurea cyanus*	2	1.8	92.1	3
	3	*Cuscuta spp.*	2	1.8	90.5	3
	4	*Phleum pratense*	4	3.3	82.8	1

GERMINATION Ratings **Total number of participants = 175**





Means and Standard Deviation
of the obligatory accredited participants
calculated for the category of normal seedlings

Categories	Mean Values %			Standard Deviation		
	Lot 1	Lot 2	Lot3	Lot 1	Lot 2	Lot 3
Normal seedlings	**93**	**93**	**88**	**1.76**	**1.88**	**2.76**
Abnormal seedlings	4	4	6	-	-	-
Non-germinated seed	3	3	6	-	-	-

Method used
overview for all participants
presented for the temperature, substrate and pretreatment

Temperature °C	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
20	114	59	**173**
20⇔30*	**1**	**1**	**2**

* this temperature is not prescribed in the ISTA Rules

Substrate	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
TP	89	42	**131**
BP	26	17	**43**
Not reported		1	**1**

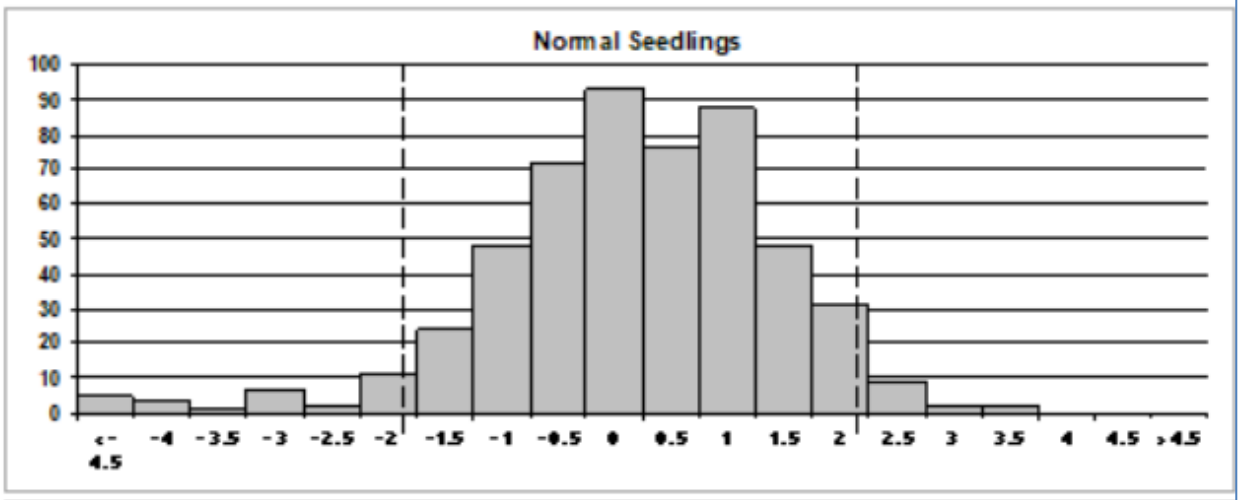
Pretreatment	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
No Treatment	71	35	**106**
Prechill	40	24	**64**
Light / no light	4	1	**5**

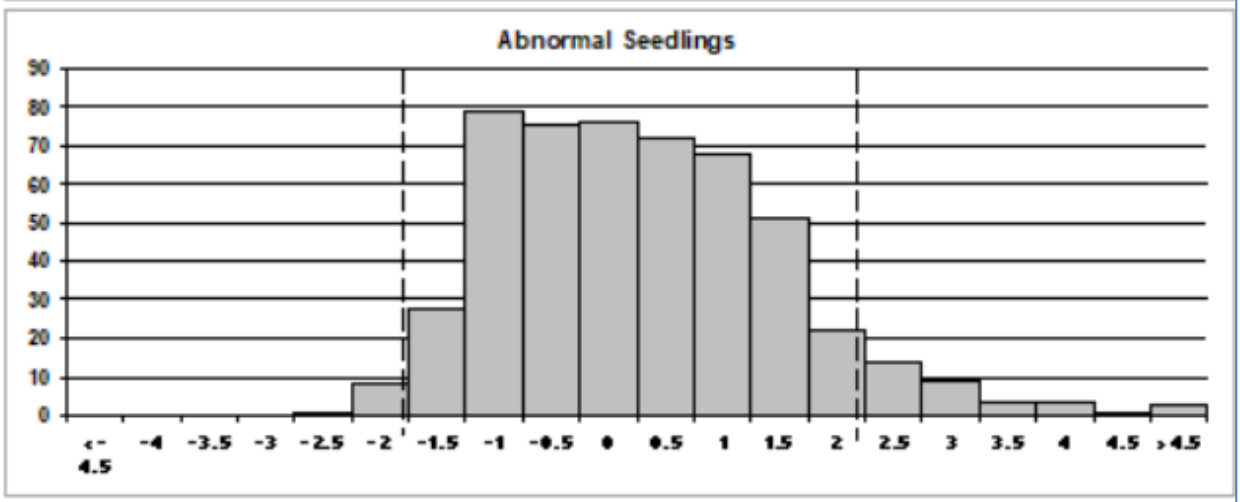
Z-score Distribution

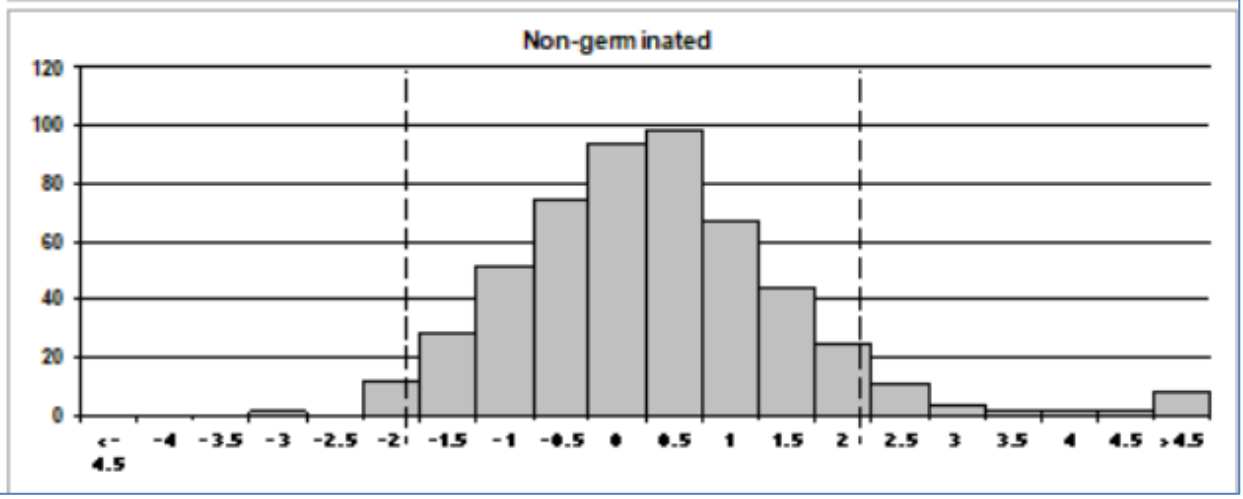
Proficiency Test Report – Test Round 24-3 L.sat

Species: Lactuca sativa **Scope:** Germination

The following histograms show the frequency distributions of all participants Z-Scores for the relevant components, i.e. **Normal** and **Abnormal Seedlings** and **Non-germinated Seeds**. The Z-Scores from all three samples are included in each histogram. For further explanations, please refer to the document 'The ISTA Proficiency Test Programme'







Abnormal seedlings Lot 1

Abnormal seedling Lot 2

Abnormal seedlings Lot 3

Lactuca sativa-Lot 3-Abnormal