



## INTERNATIONAL SEED TESTING ASSOCIATION (ISTA)

Secretariat, Zürichstrasse 50, 8303 Bassersdorf, CH-Switzerland

Phone: +41-44-838 60 00, Fax: +41-44-838 60 01, Email: [ista.office@ista.ch](mailto:ista.office@ista.ch), <http://www.seedtest.org>

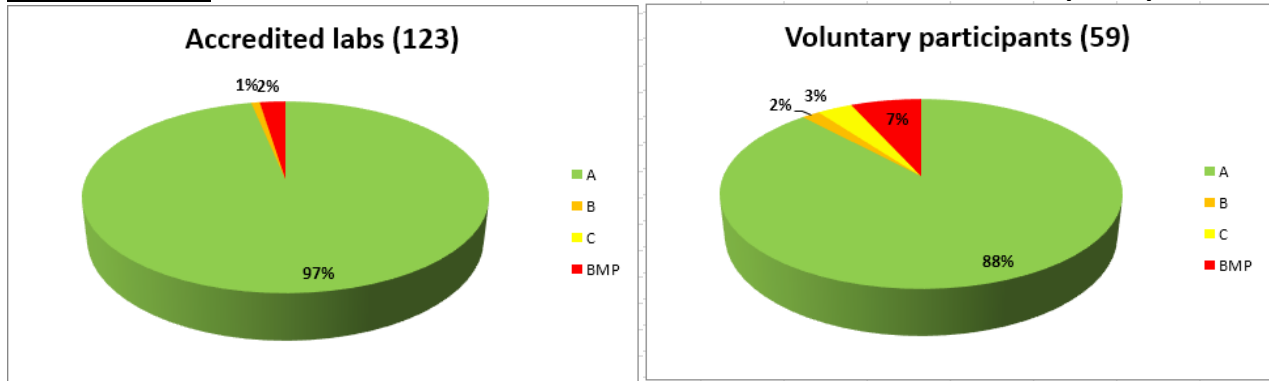
### Summary results: PT 19-2 B.nap

Species: *Brassica napus*

Scope: PUR, OSD, GER, TZ

#### PURITY Ratings

Total number of participants = 182



#### 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	99.2	99.1	99.0	0.18	0.19	0.20
Other seed	0.2	0.1	0.3	-	-	-
Inert matter	0.6	0.8	0.7	-	-	-



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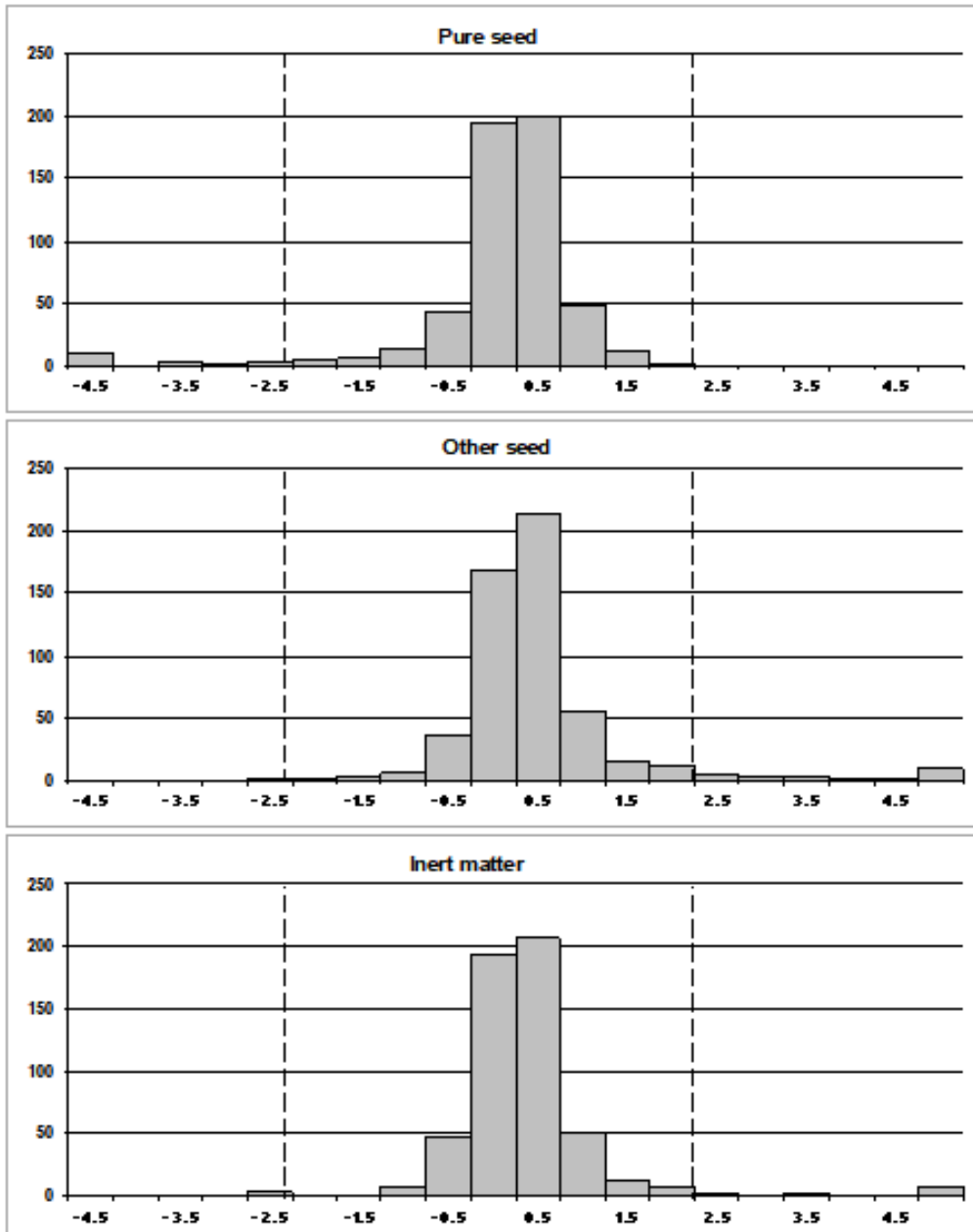
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### Z-score Distribution

Species : Brassica napus

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'





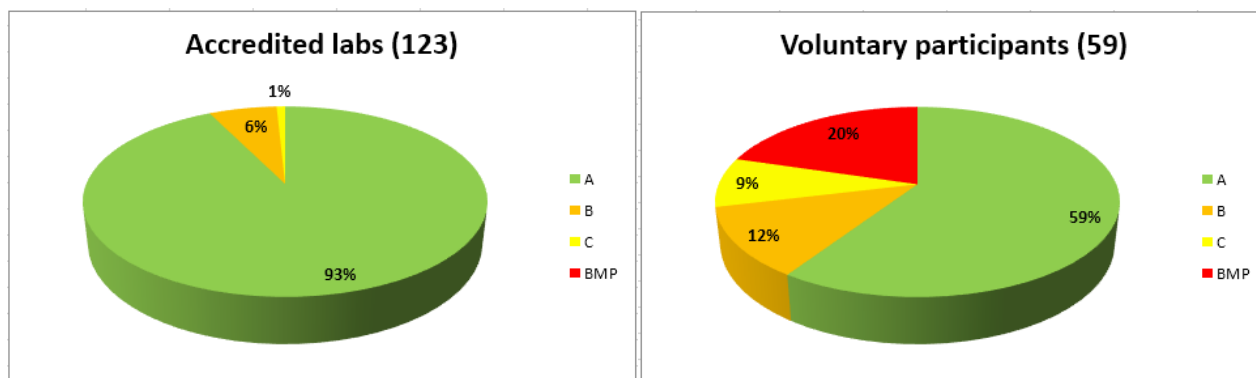
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### OSD Ratings

Total number of participants = 182



### Retrieval rates

Species: *Brassica napus*

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 value
Lot 1	1 <i>Alopecurus myosuroides</i>	3	2.6	87.7	2
	2 <i>Echinochloa crus-galli</i>	2	1.8	89.6	2
	3 <i>Galium aparine</i>	3	2.7	89.2	2
	4 <i>Papaver rhoeas</i>	4	2.8	70.8	1
Lot 2	1 <i>Sinapis alba</i>	2	1.7	83.3	1
	2 <i>Stellaria media</i>	4	3.2	80.0	1
	3 <i>Thlaspi arvense</i>	3	2.6	85.7	2
	4 <i>Tripleurospermum inodorum</i>	3	2.4	79.9	1
Lot 3	1 <i>Capsella bursa-pastoris</i>	4	3.1	77.0	1
	2 <i>Centaurea cyanus</i>	3	2.7	88.9	2
	3 <i>Fallopia convolvulus</i>	2	1.6	82.1	1
	4 <i>Fumaria officinalis</i>	3	2.4	81.6	1



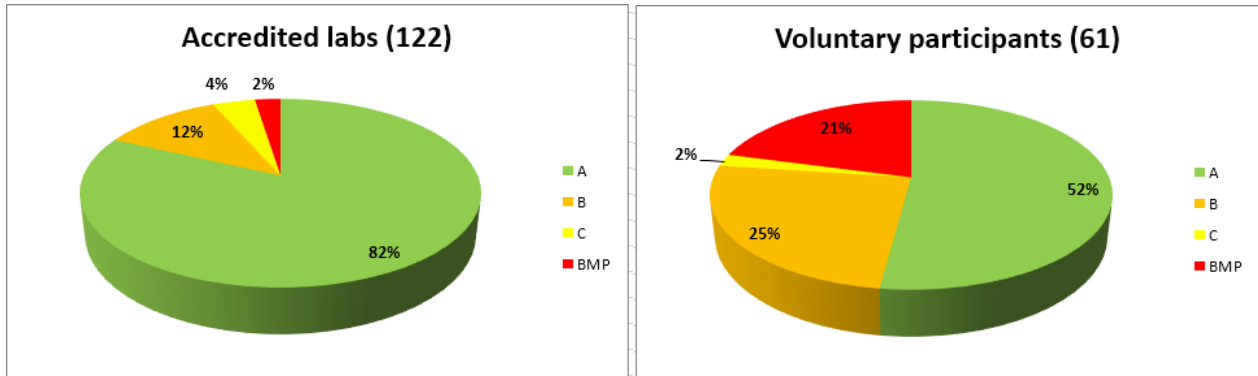
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### GERMINATION Ratings

Total number of participants = 183



### 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	Lot 3	Lot 1	Lot 2	Lot 3
Normal seedlings	90	93	81	2.28	1.96	3.65
Abnormal seedlings	8	6	17	-	-	-
Non-germinated seed	2	1	2	-	-	-

### Method used

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

Temperature °C	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
20	56	27	83
20<=>30	66	34	100



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Substrate	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
PP	29	6	35
TP	78	36	114
BP	15	19	34

Pretreatment	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
No Treatment	66	44	110
Prechill	23	7	30
Prechill+KNO3	4	2	6
KNO3	24	13	37



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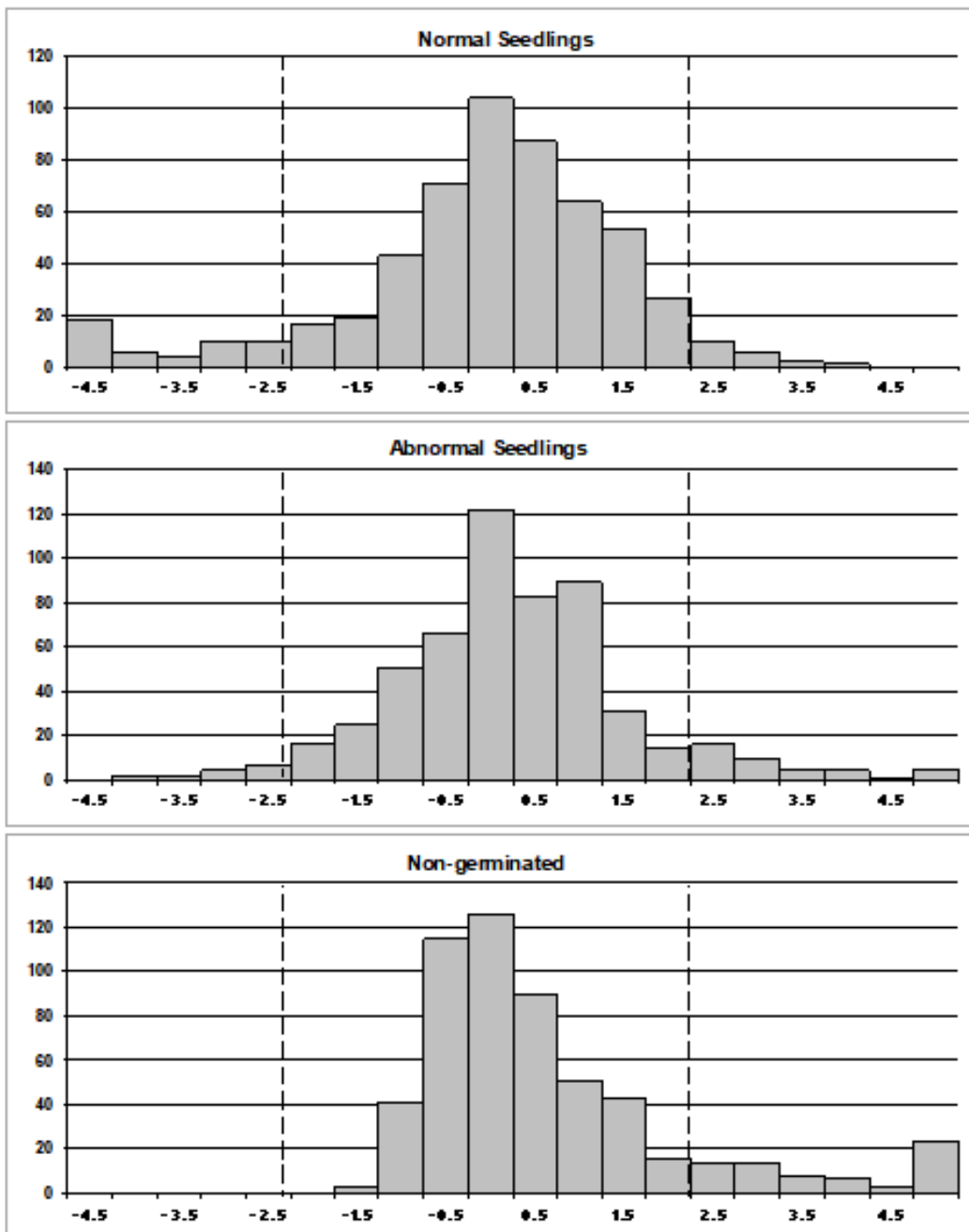
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### Z-score Distribution

Species : Brassica napus

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'





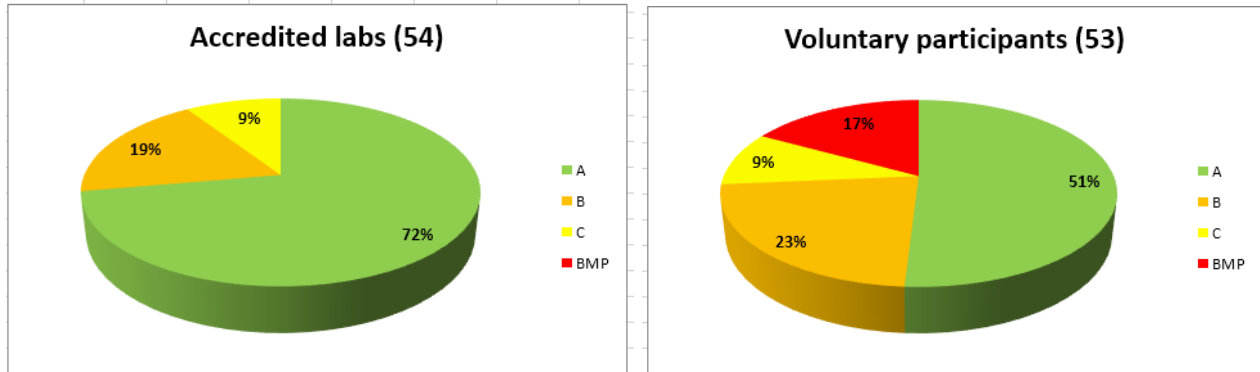
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### Tetrazolium test Ratings

Total number of participants = 107



### Means and Standard Deviation

of the obligatory accredited participants

Categories	Mean Values %			Standard Deviation		
	Lot 1	Lot 2	Lot3	Lot 1	Lot 2	Lot 3
Viable	92	93	82	2.12	2.44	4.98

### Method used

overview for all participants

presented for the preparatory method, solution concentration, temperature and staining time duration

Method	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
Piercing of the seed	2	0	2
Transfersal cut	2	1	3
Removal of the seed coat	48	50	95
No preparation	1	6	7



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Solution %	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
0.5	3	1	4
1	49	48	97
Not reported	2	4	6

Temperature °C	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
20 to 25	2	4	6
30 to 31	49	47	96
35 to 41	2	3	5

Staining time (hours)	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
1 to 2 h	0	2	2
3	37	27	64
4 to 6 h	2	3	5
17 to 24 h	14	22	36





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### Z-score Distribution

**Species :** Brassica napus

**Scope:** Tetrazolium

The following histogram shows the frequency distributions of all participants Z-Scores for the viability test. 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'.

