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To all participants
ISTA GMO Proficiency Test
PT23

Wallisellen, 20 October 2022

Dear Madam, dear Sir,

Proficiency Test Results and Rating

Please find enclosed your laboratory's test results and ratings for PT23.

EXPERIMENTAL DESIGN

Samples were either negative, i.e. did not contain any transgenic events, or positive, i.e. contained the transgenic events A5547-127 (Liberty Link soybean; ACS-GMØØ6-4) and MON89788 (Roundup Ready 2Yield soybean; MON-89788-1). When preparing the positive samples, defined numbers of seeds were mixed with non-GM seeds. The purity of both seed lots used in this PT round (GM and non-GM) was checked by PCR and confirmed as meeting the purity standard required, prior to sample preparation.

Each participating laboratory received a sample set made of 8 numbered soybean seed samples, containing approximately 1000 seeds based on the 1000 seed weight.

The sample sets comprised samples with spiking levels listed in the following table:

PT23 sample details

Spiking level	**0%**	**0.5%**	**0.7%**	**1.2%**
Event	None	A5547-127	MON89788	A5547-127, MON89788
Lot numbers	1, 2	3, 4	5, 6	7, 8
Number of samples	2	2	2	2
Number of non-GM seeds	1000	995	993	988
Number of GM seeds	0	5	7	8+4=12

EVALUATION

Sample sets were sent to 36 laboratories. 36 participants submitted their results, 8 provided qualitative results only. One lab submitted results for MON89788 only.

QUALITATIVE RATING

The rating for the presence/absence (qualitative) results is based on a percentage of misclassified samples out of the total samples. Misclassification may either be a false positive or a false negative result. Missing results for individual samples are considered as misclassification.

Rate	Misclassified samples	Misclassified samples absolute numbers	Number of laboratories
A	0% - 5%	0	35
B	>5% - 10%	0	0
C	>10% - 20%	1	0
BMP	>20%	>1	1

QUANTITATIVE RATING

The quantitative rating is based on the quantification results for the positive samples and their reference value (samples with zero spiking level are not used in quantification rating). The reference value is either the number of GM seeds in percent, the mass of the GM seeds in percent or the median of the results reported by the participants in the unit '%DNA copies'. Which value is chosen as the reference is determined by the panel of experts appointed for each round, the guiding principle being:

Unit for reporting results	Reference value
% number of seeds (e.g. for "sub-sampling" quantification)	% number of seeds by counting
% mass	% mass by weighing
% number of DNA copies	median of results % number of DNA copies

Important Note:

Before PT19 round, a change in the procedure has been made in order to better take into account recognized standards regarding the precision of a quantitative result. Therefore, in the definition of the Reference intra-laboratory standard-deviation used in the computation of the z-scores, we have introduced the following change (using the same notations as in the reference document in ISTA News Bulletin No. 130):

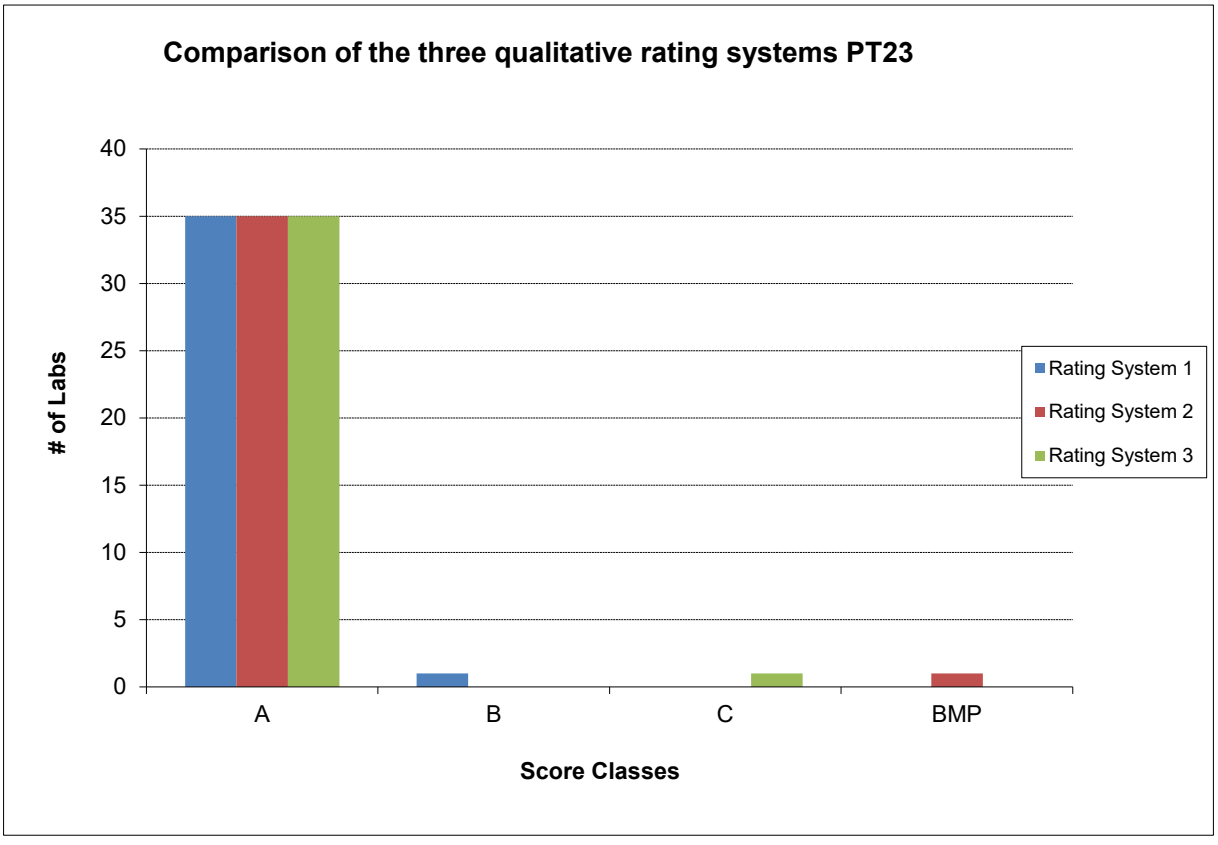
If (reference lab stdev)/(true level) is lower than 0.25, use 0.25 x (true level) as the Reference intra-laboratory standard deviation.

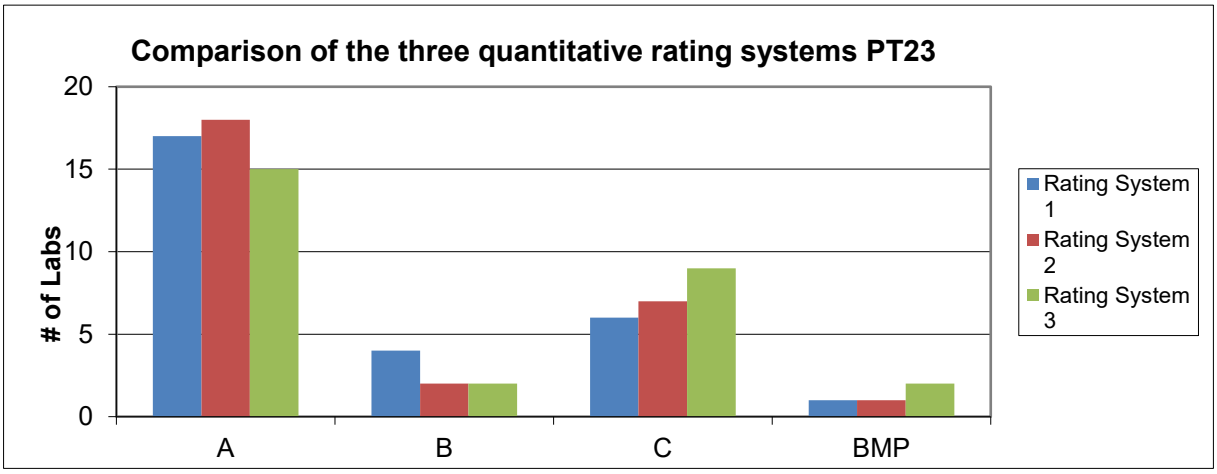
The ratings awarded in this round were as follows:

Rate	Number of laboratories
A	18
B	2
C	7
BMP	1

The reporting units used by participants were as follows:

Reporting unit	Number of laboratories
% number	6
% mass	12
% DNA copies	10





If you require a more comprehensive explanation of the rating system, please refer to Seed Testing International, The ISTA News Bulletin No. 130 (quantitative rating) and No. 128 (qualitative rating) or contact the ISTA Secretariat.

Yours sincerely,

Nadine Ettel

TCOM Manager

Enclose: mentioned