



## 3rd International Workshop on Harmonisation of GMO Detection and Analysis for Central and South America

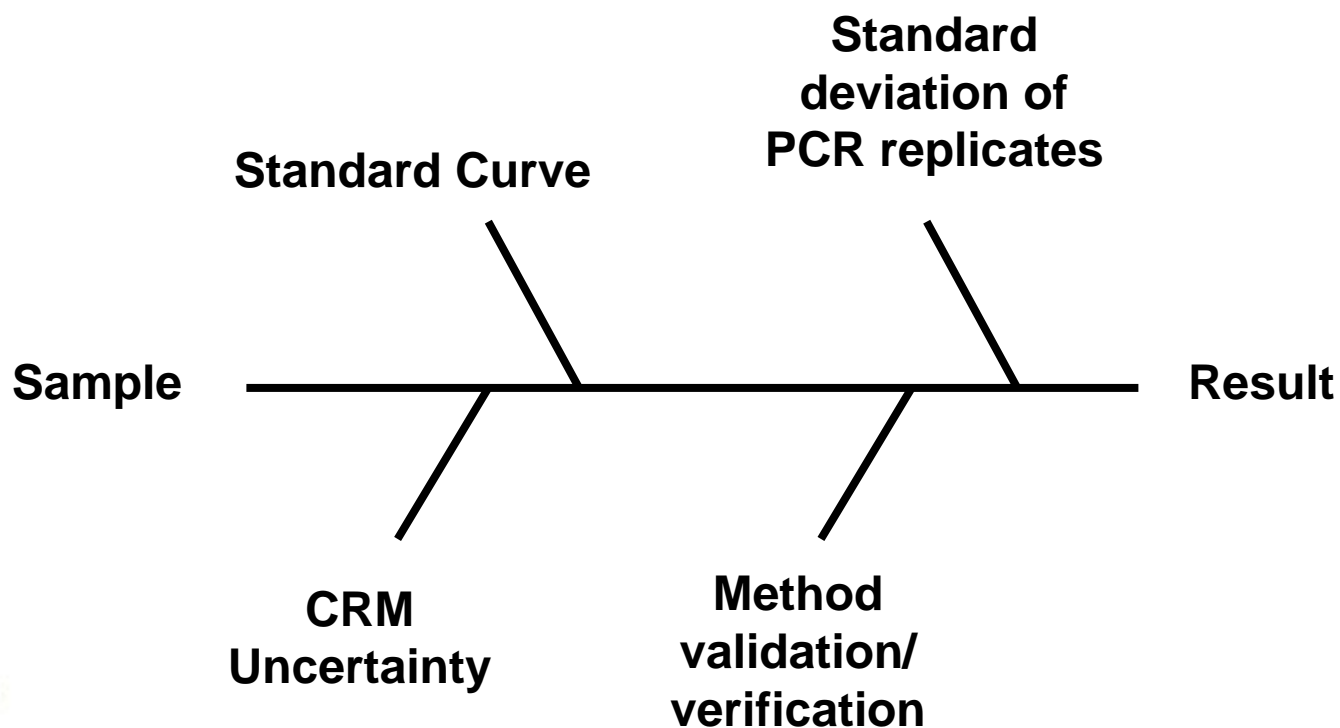
### An alternative approach on Measurement Uncertainty estimation for quantitative GMO analyses

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# 4 possible sources identified:



# Standard Curve:

- Uncertainty of the interpolated values of the CRM standard curve;

# CRM Uncertainty:

- Uncertainty of CRM, provided in the Certificate;

# Method verification:

- Bias of each level evaluated during the method verification according to JRC Guidance;

# PCR replicates:

- Standard deviation of the PCR replicates which are carried out for the specific sample;



# Nice things about this approach:

- Estimates measurement uncertainty for each sample, each moment it is performed;
- The same sample, if analysed in two different moments, obtaining the same quantification results, may have different Measurement Uncertainty estimates;
- Depends on the variation of the PCR replicates, standard curve results;
- Considering it is the same sample and the same analysis, only the method verification and CRM Uncertainty keep the same;
- The excel file is ready to be used, free to be customized and available to be distributed and copied.

# Necessary improvements:

- Instructions must be clearer and compiled into a document;
- Layout is not totally finished, and the cells where you have to place your data are confusing, if you are not na experienced user.

**Considering this, we invite you all to work on that by giving suggestions and criticizing the Methodology and the file. Starting now!**



# Gracias!

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