The SANTE document in order to harmonize the laboratories responsible for the official control of pesticide residues in food, recommends the use of a value (default of ±50% expanded uncertainty) for measurement uncertainty (coverage factor k, confidence level 95%).

Measurement Uncertainty and Compliance with the MRL

The use of this default value is subject to the demonstration that the expanded uncertainty of the laboratory is not more than 50% (i.e., the SANTE validation).

Calculation of individual MU

\[ u' = \sqrt{u(RSD_{WR})^2 + u'(bias)^2} \]

Calculation of Generic MU

\[ u'(bias)_i = \sqrt{(RMS_{bias, PT}^T)^2 + u'(C_{ref})_i^2} \]

\[ RMS_{bias, PT} = \sum \frac{bias_{PT}}{m} \]

\[ u'(C_{ref})_i = 1.253 \cdot \sum \frac{RSP_T}{m} \]

References


European Committee for Standardization. Foods of plant origin – Multimethod for the determination of pesticide residues using GC and LC-based analysis following solvent/ultrasound extraction and cleanup by dispersive SPE – Module QuEChERS method. EN 15662:2018

Workshop Eurachem/Eurolab Workshop
Uncertainty from sampling and analysis for accredited laboratories
Berlin the 19th - 20th November 2019