

Task information

QAPP name

Average weight control

QAPP version

2.0.1

Description

This application serves for average weight control of packaged goods according to the 76/211/EEC and is used to optimize filling processes and to document compliance with legal requirements. The software offers an administrator and a user level. The administrator can create products or edit or delete saved products. All products are stored in a product database and called up by the user to test a product according to the specified paragraph. Before starting the average weight control, the software application checks for safety whether the used balance is verified and whether the verification scale interval e for measuring the product corresponds to the minimum requirement according to 76/211/EEC. If one of the requirements is not fulfilled, the software application displays a warning message and the average weight control measurement cannot be started.

The application offers the test of products with tolerances according to 76/211/EEC and with freely definable tolerances. You can choose between destructive and non-destructive methods for testing products. With the destructive measurement, the filled packaging is measured in the first step and the empty weight of the packaging (tare) is determined in the second step, with the non-destructive measurement this process is reversed, i.e. first the empty weight of the packaging is measured and then the weight of the filled packaging. To simplify matters, the mean tare weight can also be entered. In this case, only the filled packaging is weighed and the filling weight is automatically calculated by subtracting the mean tare weight.

Based on the nominal filling quantity and the selected paragraph, the permissible tolerances according to 76/211/EEC are automatically applied by the software. The number of samples inside and outside the tolerances (TU, TU1, TU2 and TO, TO1, TO2) and outside the plausibility limit (OOP) is counted and displayed dynamically on the weighing screen.

TU = nominal filling quantity - internal, lower tolerance limit

TU1 = nominal filling quantity - tol. S.

TU2 = nominal filling quantity - tol. S/2 * tol. S./3 * tol. S.

TO = nominal filling quantity + internal, upper tolerance limit

TO1 = nominal filling quantity + tol. S.

TO2 = nominal filling quantity + tol. S/2 * tol. S./3 * tol. S. S.

OOP = nominal filling quantity outside the set plausibility limit

Tol. S = permissible minus deviation

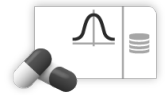
The statistics for each measurement is saved by the average weight control software application and can be used to generate shift and lot statistics. For the shift statistics, all results that were measured for a lot between a defined shift start and end time are saved and for the lot statistics, the result of selected measurements are summarized in a single statistic. Users with the role right to create tasks can finish the lot statistics. All measurement results for a lot are summarized in a report and can be printed for documentation.

The application uses the following calculations:

Mean value: $\text{avg} = \text{initValue} + (\text{sumSampleweight} / n)$

Long-term mean: $\text{l-mean} = (\text{avg} + \text{l-avg}) / 2$

Standard deviation: $\text{dev} = \sqrt{(n * \text{sum2Sampleweight} - \text{sumSampleweight} * \text{sumSampleweight}) / (n * (n-1))}$ |
 $\text{sum2Sampleweight} = \text{sum2Sampleweight} + (\text{addValue} * \text{addValue})$



Range: range = maximum - minimum

The software checks after each sample whether:

Current weight value $\geq$ nominal filling quantity * (plausibility / 100), add +1 to the counter for outside plausibility (OOP) if the sample is outside plausibility

If measured weight = between nominal filling quantity and TU, no action, add +1 to the counter for OK

If measured weight $<$ TU and $>$ TU1, display info screen for 1 second, add +1 to the counter for TU

If measured weight $<$ TU1 and $>$ TU2, display warning for 1 second, add +1 to the counter for TU1

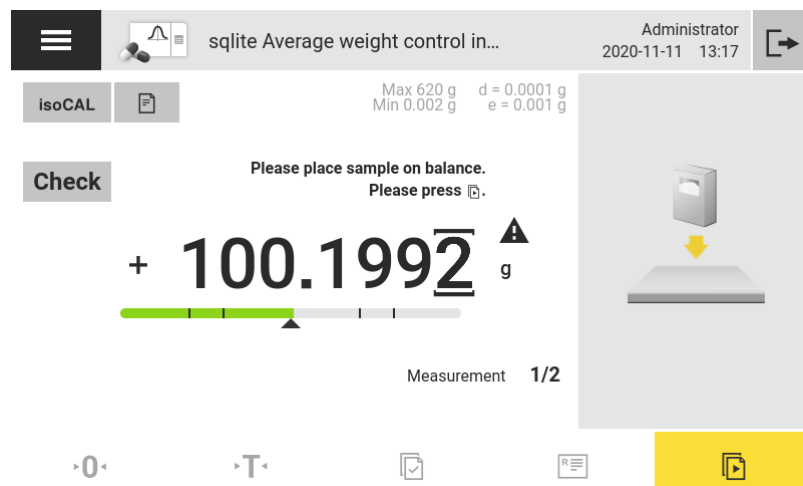
If measured weight $<$ TU2, display warning for 1 second, add +1 to the counter for TU2

If measured weight = between nominal filling quantity and TO, no action, add +1 to the counter for OK

If measured weight $>$ TO and $<$ TO1, display info screen for 1 second, add +1 to the counter for TO

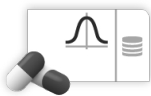
If measured weight $>$ TU1 and $<$ TO2, display warning for 1 second, add +1 to the counter for TO1

If measured weight $>$ TO2, display warning for 1 second, add +1 to the counter for TO2



✕ Select action

Test stored product
Create/edit/delete product
Create shift statistics
Finish lot statistics
View result
View statistics of multiple results



Product ID	Corn flakes
Description	Art. 12345
Test	Non-destructive
Product type	Solid
Test acc. to	Nominal filling quantity up to 10 kg
Lot size	500
× Product configuration ✓	

☰

Average weight control incl. DB

Administrator
2020-11-12 13:37

➡

isoCAL

Max 620 g
Min 0.002 g

d = 0.0001 g
e = 0.001 g

Check

Please remove sample from weighing pan.

+

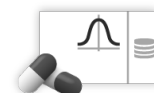
10.0006

g

Measurement 9/10

TU2 TU1 TU OK TO T01 T02

2005110



Task settings

Name	Test 2 Leopharma
Description	QAPP003 v. 2.0.1
Automatic takeover	On
Minimum load	100 digits
Number of shifts	0
Samples lower TU2	Acquire with task password
Password	
Database type	Internal database
No. of lot IDs	1
No. of sample IDs	1
Lot ID 1 header	LOTTO
Lot ID 1 title	BATCH NUMBER:
Sample ID 1 header	CANALE
Sample ID 1 title	Canale:
Sample ID 1 mode	With auto increment
Weighing profile	Pesata standard
Print profile 1	PDF Report Printout
Print profile 2	Off
Allowed roles	Amministratore Operatore Service Ospite