

Q-QUIZ OCTOBER 2017 - ANSWERS

MICHAEL RADECK | Q-DAS GMBH



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Statistics forms the basis of quality control. For successful quality control, you thus need basic knowledge of statistical methods.

1. The computer-assisted calculation includes a subgroup size of 800 bottles, the number of defective units of 6, an error probability of 5% and a subgroup estimate of 0.75%. The proportion of bottles with a broken cap seal lies between 0.2757 and 1.6252%.

2. The computer-assisted calculation is based on a normal distribution including a subgroup size of 36 bottles, a standard deviation of 1.2 ml and an error probability of 5%. The standard deviation of the population thus amounts to a value between 0.973 ml and 1.560 ml.

3. Once again we perform a calculation based on a normal distribution including a subgroup size of 36, an average filled volume of 33.125 ml and a standard deviation of this filled volume amounting to 1.2 ml. The value range of μ thus reaches from 32.719 ml to 33.531 ml.

4. The name of the employee is nominally scaled because you can distinguish names but you cannot measure them and they do not follow any rank order.

5. The probability of having 2 to 4 errors in the next unit you produce amounts to 0.4236.

