

Comparison of evaluation procedures used by European external quality assessment scheme organizers for haemoglobin concentration and leukocyte concentration

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Abstract This study aimed to assess currently used evaluation procedures for haemoglobin concentration and leukocyte concentration in European external quality assessment schemes (EQAS). Participating EQAS organizers were asked to complete a questionnaire gathering information on the statistical procedures used to assess the performance of participants, and to analyse an Excel file with 262 results for haemoglobin concentration and leukocyte concentration. Responses were received from the New York State Proficiency Testing programme in the US and from 11 European EQAS: Belgium, Croatia, Finland, France, Germany, Hungary, Russia, Slovenia, Spain (two organizers), and Switzerland. Five of the 11

European EQAS use fixed limits based upon experience, biological variation, state of the art, or professional consensus. The other EQAS use variable limits based upon statistical analysis of the performance attained. With the exception of the German, Hungarian, and Slovenian schemes, all European EQAS use consensus target values. The percentage of unsatisfactory results obtained by the European EQAS organizers for the given set of data varied between 0.4 and 15.6% for haemoglobin concentration and between 0 and 19.8% for leukocyte concentration.

Keywords Acceptability criteria · External quality assessment scheme · Haemoglobin concentration · Leukocyte concentration

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