External Evaluation of LIAISON® Tumour Marker Assays on the Fully Automated Chemiluminescent LIAISON® Immunoassay Analyser

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SUMMARY

The LIAISON® immunoassay analyser was tested in a multicentre evaluation performed by 8 laboratories. The analytes evaluated were CA 15-3®, CA 19-9™, CA 125ITm, AFP, CEA, NSE and PSA. Excellent results were obtained for within-run and between-run precision with most assays showing within-run CVs < 5% and between-run CVs between 4 and 8%. The linearity of all assays was acceptable, however, for PSA, NSE and CA 19-9™ a recovery > 110% was obtained for some of the samples tested. None of the assays revealed a high-dose hook effect. Method comparisons were performed by using the routine method of the respective study centre. Results generally showed an acceptable agreement between the LIAISON® system and the different methods of comparison. The reference ranges for all assays were found to be in accordance with data known from the literature. All assays showed similar results for serum, heparinised plasma and EDTA plasma. Additionally, two experiments were performed with only one of the analytes tested: the sample-to-sample carry-over, using the CA 19-9™ assay (3.3 x 10⁻⁶ - 2.3 x 10⁻⁵) and the functional sensitivity for the PSA assay (0.2 ng/ml). (Clin. Lab. 2000;46:169-179)