



Evaluation of and experiences with the Abbott alinity clinical chemistry and immunoassay systems

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Performance of the newly developed Alinity clinical chemistry (CC) and immunoassay (IA) systems was evaluated in independent laboratories including our laboratory and 4 other laboratories in different countries. Alinity data were compared to the performance of the respective Architect systems under routine conditions. All assays tested on Alinity CC (Na, K, Cl, Ca, Mg, creatinine, glucose, ALT, AST, total protein) and IA systems (HBsAg, anti-HCV, HIV-Combo, rHTLV I/II, syphilis, high sensitive cardiac troponin I, TSH, HCG) showed excellent correlation to Architect assays. Linearity, precision, and correlation to the current Architect systems were fully satisfying. In the table precision data for several infectious disease assays performed in our laboratory are shown.

Assay	Level	Within day %CV	Total %CV (95% CI)
HBsAg (qual)	neg	8.32	10.56 (7.48-17.95)
	pos	1.84	1.98 (1.51-2.89)
HBsAg (qual – confirm)	pos	2.40	2.68 (2.04-3.93)
HBsAg (quant)	neg	0.00	0.00
	pos*	2.69	2.77 (2.15-3.88)
Anti-HCV	neg	5.35	5.92 (4.52-8.62)
	pos	3.04	3.71 (2.73-5.78)
HIV-Combo	neg	9.70	11.19 (8.41-16.70)
	pos*	2.55	2.85 (2.17-4.18)
rHTLV I/II	neg	8.02	8.12 (6.33-11.34)
	pos	7.53	8.24 (6.31-11.90)
Syphilis	neg	0.00	0.00
	pos	1.25	1.42 (1.07-2.10)

*) If more than one positive level was tested, the lowest positive level is shown

Data on all assays listed above will be presented.

In a further analysis sample throughput of the Alinity systems was shown to be moderately higher than with the Architect systems, but with a much smaller footprint.

Conclusions. Several CC and IA tests for the novel Alinity systems have been evaluated under conditions of routine laboratory testing. Linearity, precision, and correlation to the current Architect systems have been fully satisfying. Sample throughput of the Alinity systems is moderately higher than with the Architect systems, but with a much smaller footprint.