



Characteristics of immunochemical (c-ELISA) and mass spectrometry (WCX-TOF MS) assays

	c-ELISA	WCX-TOF MS
Costs	See price list (available on request)	See price list (available on request)
Sensitivity	LLOD < 0.45 nM	LLOD < 0.5 nM
Reproducibility (CV)	< 15%	< 10%
Specificity	measures total hepcidin [^]	measures hepcidin-25
References	Kroot <i>et al.</i> , Clin Chem 2010 Galesloot <i>et al.</i> , Blood 2011	Swinkels <i>et al.</i> , PLoS One 2008 Kroot <i>et al.</i> , Clin Chem 2010 Laarakkers <i>et al.</i> , PLoS One 2013 www.hepcidinanalysis.com

NA, not applicable; LLOD, lower limit of detection; [^], total hepcidin is sum of hepcidin 25 and all smaller isoforms of hepcidin. Samples with high hepcidin values generally also comprise isoforms. Among others, these samples are from patients with chronic kidney disease, severe inflammation or infection and sepsis.

References

Swinkels DW, Girelli D, Laarakkers C, Kroot J, Campostrini N, Kemna EH, Tjalsma H. Advances in quantitative hepcidin measurements by time-of-flight mass spectrometry. *PLoS ONE* 2008; **3**: e2706.

Kroot JJ, Laarakkers CM, Geurts-Moespot AJ, Grebenchtchikov N, Pickkers P, van Ede AE, Peters HP, van Dongen-Lases E, Wetzels JF, Sweep FC, Tjalsma H, Swinkels DW. Immunochemical and mass-spectrometry-based serum hepcidin assays for iron metabolism disorders. *Clin Chem* 2010; **56**: 1570-1579.

Galesloot TE, Vermeulen SH, Geurts-Moespot AJ, Klaver SM, Kroot JJ, van Tienoven D, Wetzels JF, Kiemeny LA, Sweep FC, den Heijer M, Swinkels DW. Serum hepcidin: reference ranges and biochemical correlates in the general population. *Blood* 2011; **117**: e218-25.

Laarakkers CM, Wiegerinck ET, Klaver S, Kolodziejczyk M, Gille H, Hohlbaum AM, Tjalsma H, Swinkels DW. Improved mass spectrometry assay for plasma hepcidin: detection and characterization of a novel hepcidin isoform. *PLoS One* 2013; **8**: e75518.