

## Principle of the Assay



Micronutrient deficiencies can have systemic and enduring effects on health and wellbeing. If left untreated, they can significantly reduce quality of life and may even have deadly consequences. While micronutrient malnutrition can be found in populations across the globe, it disproportionately affects children and women of reproductive age in low- and middle-income countries. Public health surveillance programs are needed to identify populations at risk, determine the appropriate interventions to apply, and monitor program impacts.

The Q-Plex Human Micronutrient v2 (7-

plex), developed in partnership with PATH, facilitates micronutrient status surveillance by simplifying

laboratory testing and reducing cost.



Performance of the new Q-Plex Human Micronutrient v2 (7-Plex) was optimized to improve precision and recalibrated using samples provided by the Centers for Disease Control Performance Verification Program for Serum Micronutrients as well as the Vital-EQA program. Continued participation in the Vital-EQA program increases confidence in the assay through the elimination of bias.

The Q-Plex Human Micronutrient v2 (7-Plex) is an accurate and affordable tool for measuring micronutrient biomarkers in serum and plasma samples collected as part of related public health surveillance programs. With the ease of use of a traditional ELISA protocol, the platform will help facilitate testing within the survey country.

Analytes	Assay Type	Calibrator Range	Upper Limit of Quantification (ULOQ)	Lower Limit of Quantification (LLOQ)	Limit of Detection	Precision* (Inter-assay)	Precision* (Intra-assay)	Average* Linearity
AGP	Competitive	0.36 - 0.00049 (g/L)	0.25 (g/L)	0.0019 (g/L)	0.00025 (g/L)	5%	5%	102%
CRP	Sandwich	1 - 0.0014 (mg/L)	0.7 (mg/L)	0.0018 (mg/L)	0.00069 (mg/L)	5%	7%	103%
Ferritin	Sandwich	23.1 - 0.032 (µg/L)	16.2 (μg/L)	0.041 (µg/L)	0.016 (µg/L)	7%	8%	87%
HRP2	Sandwich	1.9 - 0.0026 (μg/L)	1.33 (µg/L)	0.010 (µg/L)	0.0013 (µg/L)	7%	5%	101%
RBP4	Competitive	1.01 - 0.0014 (µmol/L)	0.71 (µmol/L)	0.0054 (µmol/L)	0.00069 (µmol/L)	6%	8%	95%
sTfR	Sandwich	4 - 0.0055 (mg/L)	2.8 (mg/L)	0.0071 (mg/L)	0.0027 (mg/L)	10%	11%	101%
Thyroglobulin	Sandwich	15.1 - 0.021 (μg/L)	10.57 (μg/L)	0.027 (µg/L)	0.01 (µg/L)	6%	11%	100%

<sup>\*</sup> Actual values may vary from kit to kit. Please see the In-Kit Certificate of Analysis included in your kit for specific values.





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