

ELISA 2.0 – Validated Performance Parameters

Food Allergens:

Allergen:	FOODS										Native Bos d 5	Shrimp Tropomyosin
	Ana o 3	Ara h 1	Ara h 2	Ara h 3	Ara h 6	Ara h 8	Cor a 9	Gal d 1	Gal d 2	Gly m 5		
Linearity (R^2)¹	1.0	1.0	0.999	0.999	1.0	1.0	0.998	1.0	1	1.0	1.0	0.999
Range (ng/ml)²	20-0.16	1000-31.25	125-0.98	62.5-0.49	25-0.05	12.5-0.20	50-0.39	250-7.81	50-0.39	250-1.95	12.5-0.10	25-0.20
Limit of Quantification³												
<i>LLOQ (ng/ml)^{3a}</i>	0.16	31.25-15.63	3.91-0.49	1.95-0.49	0.20-0.05	1.56-0.20	0.78-0.39	7.80-3.90	0.78-0.39	3.91-1.95	0.78-0.10	0.39-0.10
<i>ULOQ (ng/ml)^{3b}</i>	20-5	1000	250-31.25	62.5-31.25	25-12.5	25-6.25	100-12.5	250	100-25	250-62.5	25-12.5	25-6.25
Accuracy (% Recovery)⁴												
<i>Intra-assay (n=9)^{4a}</i>	85-110%	82-124%	80-116%	74-127%	105-113%	100-109%	75-112%	89-101%	91-132%	93-119%	84-120%	95-115%
<i>Inter-assay (n=54)^{4b}</i>	99%	109%	101%	97%	108%	102%	93%	95%	104%	105%	103%	108%
Precision (%CV)⁵												
<i>Intra-assay (n=9)^{5a}</i>	4-10%	3-12%	7-14%	3-11%	7-13%	3-15%	5-15%	8-13%	5-16%	5-11%	4-9%	4-14%
<i>Inter-assay (n=54)^{5b}</i>	8%	8%	10%	5%	8%	8%	10%	9%	11%	8%	6%	7%

- Linearity** is the mean R^2 of six ELISA plates for control curves generated using 4-parameter logistic fit.
- Range** is the average usable range of control curves from six ELISA plates that have a value of 70-130% of the expected concentration, with %CV < 15 between duplicate points.
- Limit of Quantification**
 - LLOQ - The lowest concentration points of six control curves with a recovery of 70-130% and %CV < 15, expressed as a range.
 - ULOQ - The highest concentration points of six control curves with a recovery of 70-130% and %CV < 15, expressed as a range.
- Accuracy**
 - Intra-assay - The range of average percent recovery of samples A, B, and C run in triplicate from six ELISA plates (n=9).
 - Inter-assay - The overall average percent recovery of samples A, B, and C run in triplicate from six ELISA plates (n=54).
- Precision**
 - Intra-assay - The range of average percent coefficient of variation of samples A, B, and C run in triplicate from six ELISA plates (n=9).
 - Inter-assay - The overall average percent coefficient of variation of samples A, B, and C run in triplicate from six ELISA plates (n=54).