



Environmental Estrogen ELISA kit **Bisphenol A (BPA)**

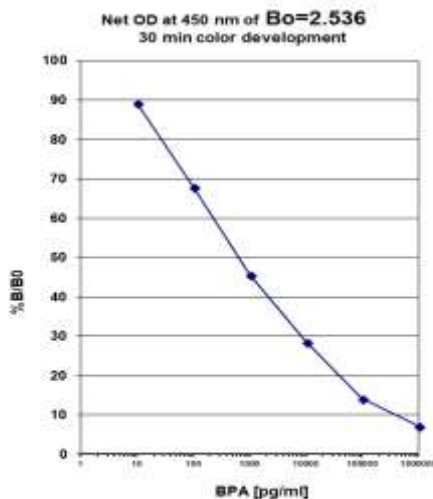
Cat # BPA1: ELISA kit for measuring BPA in biological samples, food containers, wastewater and thermal paper

This competitive ELISA kit is for determination of BPA levels in biological samples, human and animal dietary food, water and wastewater. A typical standard curve of the ELISA (detection limit of less than 10 pg/ml) is shown in the bottom left corner. BPA is a phenolic environmental estrogen, which disrupts endocrine activity. In human, the BPA glucuronide was the primary metabolite of BPA and the age group with the highest BPA exposure levels was 6-11 year olds with a mean total (free + glucuronidated) BPA level of 4.33 ng/g of creatinine¹. Urinary BPA levels have been correlated to cardiovascular diseases and diabetes¹. A study revealed that a 12-ounce serving of canned soup for 5 days increased urinary BPA level 12-fold due to lining of the can with an epoxy resin containing BPA². BPA levels in liquid obtained from canned soups (approximately 10 ng/mL) were measured using this ELISA kit⁸. Two recent studies have used the BPA ELISA kit to measure BPA levels in sewage, lake water and aquatic life^{2,3} and the role of probiotics and plants in bio-removal of BPA^{5,10}. BPA has also been implicated in glucose production and skeletal muscle insulin sensitivity^{7,11}.

BPA in urine can be measured without ethyl acetate extraction after a 4-fold dilution of the sample. Each kit is sufficient for the measurement of BPA in up to 24 triplicate samples and contains one 96 well plate, one vial of BPA standard, one vial of BPA-conjugated HRP, and buffers for sample and BPA-HRP conjugate dilutions, and plate washing.

Specificity of the BPA ELISA

BPA	100%
BPF	<0.01%
BPS	<0.01%



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- 3.. Santos, J. M., Putt, D.A., Jurban, M., Joiakim, A., Friedrich, K., Kim, H. Differential BPA levels in sewage wastewater effluents from metro Detroit communities. Environ. Monit. Assess (2016) 188: 585
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- 5.. Solouki, S., M. Reza Fazeli and S. Solouki Efficiency of multispecies probiotic supplements in bioremoval of bisphenol A: An in vitro study. Applied Food Biotechnology 5: 37-45 (2018)
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7. Hagobian, T.A. et al. (2019) Pilot study on the effect of orally administered bisphenol A on glucose and insulin response in nonobese adults. *J. Endocr Soc.* 3:643-654.
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9. Gules, O. et al. (2019) Protective effect of coenzyme Q10 against bisphenol-A-induced toxicity in the rat testes. *Toxicol Industr. Health* 35: 466-481.
10. Phouthavong-Murphy, J.C. et. al. (2020) Phytoremediation potential of switchgrass (*Panicum virgatum*), two United States native varieties, to remove bisphenol-A (BPA) from aqueous media. *Nature.com/scientific reports* 10.835.
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