



## Environmental Estrogen ELISA Kit **Bisphenol S (BPS)**

**Cat # BPS1: ELISA kit for measuring BPS in biological samples, food containers, wastewater and thermal paper**

This competitive ELISA kit is for determination of BPS 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. BPS is of major concern since it has replaced the usage of BPA in many polycarbonate and epoxy resin products. One US study detected BPS in 90% of urine samples from adults and children with a mean value of 0.3 ug/L BPS (1). BPS is an endocrine disruptor and was shown to be a developmental and mammary gland toxicant in mice and actually more toxic than BPA (2). BPA and BPS were detected in human milk by ELISA (5). BPS exposure was associated with insulin- and exercise-induced glucose uptake (3) and risk of cardiovascular diseases (4, 5).

The BPS ELISA is a sensitive and specific competitive ELISA with a detection limit of 10 pg/ml and a cross-reactivity of less than 0.01% with either BPA or BPF.

BPS 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 BPS in up to 24 triplicate samples and contains one 96 well plate, one vial of BPS standard, one vial of BPS-conjugated HRP, and buffers for sample and BPS-HRP conjugate dilutions, and plate washing.

**Related ELISA Kits**

**Environmental Estrogen ELISA kit:**  
 -BPA ELISA kit

**PM2.5 Air Pollution ELISA kit:**  
 -2-Naphthol (2-NAP) ELISA kit

**Oxidative Stress ELISA kit:**  
 - 8-Isoprostane ELISA kit

**Hypertension ELISA kits:**  
 -14,15-DHET ELISA kit  
 -11,12-DHET ELISA kit  
 - 20 HETE ELISA kit

### Specificity of the BPA ELISA

BPS	100%
BPF	<0.01%
BPA	<0.01%

1. Lehmler H-J, Liu B, Gadogbe M, Bao W. Exposure to Bisphenol A, Bisphenol F, and Bisphenol S in U.S. adults and children: The National Health and Nutrition Examination Survey 2013-2014. *ACS Omega* 3: 6523-6532 (2018).
2. Tucker, DK, Bouknight, SH, Brar, SS, Kissling, GE and Fenton SE. Evaluation of prenatal exposure to bisphenol analogues on development and long-term health of the mammary gland in female mice. *Environmental Health Perspectives* 126 (2018).
3. Riiffee JNJ, Wade M, Sine T, Griffith C, Benite-Ribeiro S, Haney A, Santos JM. The link of environmental estrogens exposure to oxidative stress and their association with insulin- and exercise-induced glucose uptake. *Obesity Medicine* 42 (2023).
4. Santos JM, Kennedy T, Zhu J, McPike A, Kim H, Dechant J. The link between Bisphenol-A and -S and 2-naphthol exposure with anaerobic-peak power, risk factor for cardiovascular diseases in active healthy young adults. *The SOT abstract #4002* (2024).
5. Santos JM, Zhu J, McPike A, Dechant J, Demirci J. Biomonitoring Endocrine Disruptor Chemicals in Human Milk: A New Approach for Understanding Cardiovascular Disease Risk in Women Living in Environmental Justice Areas. *The SOT abstract #3058* (2025).
6. McPike A, Zhu J, Dechant J, Dunbar-Jacob J, Santos JM. Targeting dietary behaviors to identify sources of BPA and BPS exposure in T2D individuals. *The SOT abstract #3199* (2025).

