



2-Naphthol (2-NAP) PM_{2.5} Air Pollution ELISA

Cat # NAP1: ELISA kit for measuring 2-NAP in biological samples

This competitive ELISA kit is for determination of 2-NAP levels in biological samples (detection limit, <10 pg/ml).

The 2-NAP and metabolites were detected in human milk¹ and urine samples (n=54) from male (43%) and female (57%) and sewage water samples collected for 5 days from 3 counties of Metro Detroit using the Detroit R&D 2-NAP ELISA^{2,3}. Burning fossil fuels and woods produce toxic PMs 2.5 and 10 mixed with polycyclic aromatic hydrocarbons (PAHs)^{4,5} which increase risk of cardiovascular diseases and lung cancer⁹⁻¹². Naphthalene is one of the major PAHs in the PMs (4.5%-13.5%)⁶. Inhaled PAHs through ambient air or occupationally exposed are biologically oxidized and excreted primarily by urine^{4,7}. Among various PAH metabolites, urinary 2-NAP level was significantly correlated with PM_{2.5} or PM₁₀ exposure^{4,5,8}, especially after wood smoke exposure⁸. Burn pit smoke exposure may correlate to various health problems of soldiers. Asthma among children was significantly associated with urinary 2-NAP levels¹³. The 2-NAP level in urine can be measured using the 2-NAP ELISA without ethyl acetate extraction after dilution of the sample. Each kit for triplicate analyses of up to 24 samples contains one 96-well plate, one tube of 2-NAP standard, one tube of 2-NAP-conjugated HRP and buffers for sample and HRP dilutions and plate washing.

Specificity of the 2-Naphthol ELISA

2-Naphthol	100%
8-Amino-2 naphthol	<0.01%
BPA	<0.01%
BPS	<0.01%

Related ELISA Kits 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

Environmental Estrogen ELISA kit:

- BPA ELISA kit
- BPS ELISA kit

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