



Life Sciences Catalog

Hormone and Steroid Kits

Eicosanoid Kits

Oxidative Stress Kits

Specialty Kits

Cytokine Kits

Forensic Toxicology Kits

Substrates and Reagents

Oral Fluid Testing and Collection



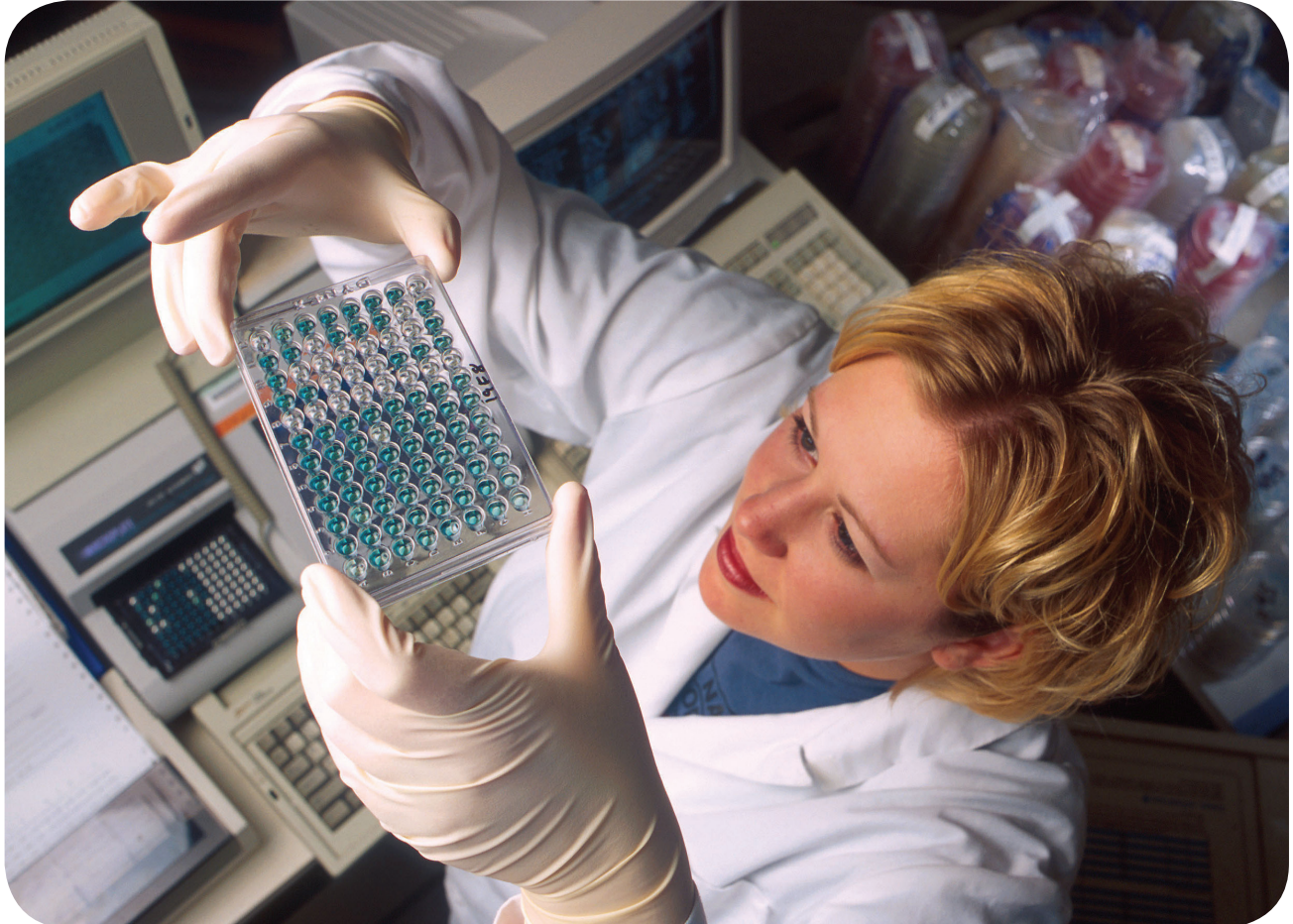
Company Profile

Founded in 1982, Neogen Corporation (NASDAQ: NEOG) is headquartered in Lansing, Mich., and has grown to more than 1,000 employees in multiple U.S. and international locations. The company's Lansing-based Food Safety Division develops and markets dehydrated culture media and rapid diagnostic test kits to detect foodborne bacteria, spoilage organisms, mycotoxins, food allergens, genetic modifications, drug residues, plant diseases, and sanitation concerns.

Neogen's Life Sciences Division is based in Lexington, Ky., and develops, manufactures and markets a diverse line of research products for life science research and forensic toxicology. Lexington is also home to Neogen's Animal Safety Division that develops and markets a complete line of diagnostics, veterinary instruments, veterinary pharmaceuticals, nutritional supplements, disinfectants, insecticides, and rodenticides. Neogen's GeneSeek subsidiary, based in Lincoln, Neb., is the leading global provider of DNA testing for animal agribusiness and veterinary medicine. Neogen has additional facilities across the U.S., and in Scotland, Mexico, Brazil, China and India.

Neogen believes maintaining earned trust is a combination of innovation and a continuous commitment to quality. Neogen's quality management system is ISO 9001 certified, which communicates to the company's worldwide customer base that it understands the quality standards customers expect, and is firmly committed to achieving those quality standards.

In recognition of this success, Neogen has been repeatedly named to Forbes Magazine's list of the Best Small Companies in America, and was chosen by the NASDAQ National Market to be included in its top tier of listed companies, the Global Select Market.



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Life Sciences Research Test Kits

ELISA for Life Sciences Research

Neogen's Life Sciences research products include a line of enzyme-linked immunosorbent assay (ELISA) test kits and reagents used for multiple research applications. The line of ELISA test kits are ultra-sensitive, quick and dependable. These quantitative test kits detect hormones, steroids, prostaglandins, leukotrienes, thromboxanes, cyclic nucleotides, histamine, and lipoxins in a wide range of sample and species types. Neogen also has an extensive line of cytokine kits available for human, mouse and rat applications. The company's test kits are used worldwide by research laboratories, pharmaceutical research labs, and academic institutions.

Sample Preparation Procedures

Urine and tissue culture supernatant can be assayed directly by diluting with extraction buffer. Plasma, serum, and most other media must be extracted following the test kit's recommended procedure.

Neogen's ELISA Advantages

- Fast results
- Easy to use
- Liquid substrate and buffers
- Pre-coated microplates with removable strips
- Low assay sample volume
- High sensitivity
- Quantitative results
- Non-radioactive
- Reproducible
- Non-species specific assays
- Ideal for automation

A summary of the assay principle can be found on page 15.



Non-Species Specific Kits

Specialty Test Kits

Product #	Name	Sensitivity: 80% B/Bo	Sensitivity: 50% B/Bo	Assay Range	Size	Sample Volume	Total Assay Incubation Time	Wavelength	Storage Conditions	Antibody
430210	Creatinine			Std. Range: 0–10 mg/dL	96-well microplate	25 µL	15 minutes	490/500 nm	4°C for standard, RT for all other components	
403110*	Cyclic AMP	0.03 ng/mL	0.10 ng/mL	0.02–2.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	-20°C for lyophilized conjugate, 4°C for all other kit components	Polyclonal, goat
409010	Histamine	70% B/Bo= 2.5 ng/mL	30% B/Bo= 10 ng/mL	2.5–50.0 ng/mL	96-well microplate	50 µL	1.25 hours	650 nm, 450 nm with stop solution	4°C	Monoclonal
407010	Lipoxin A ₄	0.04 ng/mL	0.15 ng/mL	0.02–2.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	-20°C for lyophilized conjugate, 4°C for all other kit components.	Polyclonal, rabbit
407110	15-epi-Lipoxin A ₄	0.05 ng/mL	0.2 ng/mL	0.02–2.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	-20°C for lyophilized conjugate, 4°C for all other kit components	Polyclonal, rabbit
430410	Nitric Oxide			0.5–100 µM	96-well microplate	5–85 µL	25 minutes	540 nm	-20°C for enzyme, 22°C for NADH, 4°C for all other kit components	
430310	Nitric Oxide (Non-enzymatic)			0.5–100 µM	96-well microplate	100 µL	Overnight	540 nm	Dedicated dry environment for cadmium, 4°C for all other kit components	
430510	Nitric Oxide Refill (Non-enzymatic)									

Hormone and Steroid Test Kits

402010	Androstenedione	0.015 ng/mL	0.08 ng/mL	0.01–1.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
402810	Corticosterone	0.05 ng/mL	0.37 ng/mL	0.05–5.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
402710	Cortisol	0.04 ng/mL	0.2 ng/mL	0.04–10.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
402110	Estradiol	0.03 ng/mL	0.28 ng/mL	0.02–2.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
402610*	Estriol	0.08 ng/mL	0.38 ng/mL	0.04–4.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
402510	Testosterone	0.006 ng/mL	0.029 ng/mL	0.002–0.2 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
402310	Progesterone	0.35 ng/mL	2.9 ng/mL	0.4–40.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
402410*	Progesterone (Ultra)	0.2 ng/mL	0.48 ng/mL	0.1–2.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit

Eicosanoid Test Kits

406110	Leukotriene B ₄	0.1 ng/mL	0.62 ng/mL	0.04–4.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	-20°C for lyophilized conjugate, 4°C for all other kit components	Polyclonal, rabbit
406210	Leukotriene C ₄	0.15 ng/mL	0.4 ng/mL	0.04–4.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	-20°C for lyophilized conjugate, 4°C for all other kit components	Polyclonal, rabbit
406410	Leukotriene C ₄ /D ₄ /E ₄	0.06 ng/mL	0.2 ng/mL	0.04–2.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	-20°C for lyophilized conjugate, 4°C for all other kit components	Monoclonal, rat
404810	Prostaglandin E ₂	0.1 ng/mL	1.0 ng/mL	0.1–10.0 ng/mL	96-well microplate	25 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
406510	Prostaglandin E ₂ (Monoclonal)	0.12 ng/mL	0.4 ng/mL	0.10–4.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	-20°C for lyophilized conjugate, 4°C for all other kit components	Monoclonal, mouse
404710	Prostaglandin F _{2α}	0.008 ng/mL	0.07 ng/mL	0.002–1.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, sheep

* Minimum lead time and quantities required, contact Neogen for more details.

ELISA Test Kits

Eicosanoid Test Kits, cont.

Product #	Name	Sensitivity: 80% B/Bo	Sensitivity: 50% B/Bo	Assay Range	Size	Sample Volume	Total Assay Incubation Time	Wavelength	Storage Conditions	Antibody
404310	6-keto-Prostaglandin F _{1α}	0.05 ng/mL	0.2 ng/mL	0.02–2.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
404410*	11β-Prostaglandin F _{2α}	0.015 ng/mL	0.05 ng/mL	0.01–1.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
404610*	13,14-dihydro-15-keto-Prostaglandin F _{2α}	0.04 ng/mL	0.23 ng/mL	0.02–2.0 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
405110	Thromboxane B ₂	0.009 ng/mL	0.04 ng/mL	0.004–0.4 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit
408010*	11-dehydro-Thromboxane B ₂	0.3 ng/mL	1.5 ng/mL	0.2–20 ng/mL	96-well microplate	50 µL	1.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal, rabbit

Oxidative Stress Test Kits

430010	15-Isoprostane F _{2t}	0.03 ng/mL	5.0 ng/mL	0.05–100 ng/mL	96-well microplate	100 µL	2.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal
430110	Urinary Isoprostane	0.08 ng/mL	0.45 ng/mL	0.05–100 ng/mL	96-well microplate	100 µL	<2.5 hours	650 nm, 450 nm with stop solution	4°C	Polyclonal
430710	Total Antioxidant			0.125–2.0 mM	96-well microplate	200 µL	3 minutes	450 nm	-80°C for standard, 4°C for all other kit components	

Species Specific Kits

Human Cytokine Kits

Product #	Name	Sensitivity	Assay Range	Size	Sample Volume	Total Assay Incubation Time	Wavelength	Storage Conditions	Antibody
450010	Human G-CSF	15 pg/mL	15–960 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
450110	Human GM-CSF	16 pg/mL	16–1024 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
450210	Human IFN-γ	10 pg/mL	10–640 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
450410	Human IL-1α	4 pg/mL	4–256 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
450510	Human IL-1β	4 pg/mL	4–256 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
450610	Human IL-2	40 pg/mL	40–2560 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
450810	Human IL-4	4 pg/mL	4–256 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
450910	Human IL-5	8 pg/mL	8–512 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
451010	Human IL-6	10 pg/mL	10–640 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
451210	Human IL-8	16 pg/mL	16–1024 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
451310	Human IL-10	8 pg/mL	8–512 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
451610	Human IL-13	30 pg/mL	30–1920 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
451710	Human IL-15	4 pg/mL	4–256 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
452110	Human IL-22	10 pg/mL	10–640 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal

* Minimum lead time and quantities required, contact Neogen for more details.

Human Cytokine Kits, cont.

Product #	Name	Sensitivity	Assay Range	Size	Sample Volume	Total Assay Incubation Time	Wavelength	Storage Conditions	Antibody
452310	Human IL-27	75 pg/mL	75–4800 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
453210	Human TNF- α	8 pg/mL	8–512 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
452610	Human VEGF	15 pg/mL	15–960 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal

Mouse Cytokine Kits

453510	Mouse GM-CSF	10 pg/mL	10–640 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
453710	Mouse IFN- γ	10 pg/mL	10–640 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
453910	Mouse IL-1 β	15 pg/mL	15–960 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454010	Mouse IL-2	16 pg/mL	16–1024 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454110	Mouse IL-4	12 pg/mL	12–768 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454210	Mouse IL-5	16 pg/mL	16–1024 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454310	Mouse IL-6	10 pg/mL	10–640 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454410	Mouse IL-12 (p70)	10 pg/mL	10–640 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454510	Mouse IL-12 & IL-23	10 pg/mL	10–640 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454710	Mouse IL-15	125 pg/mL	125–8000 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454810	Mouse IL-17	16 pg/mL	16–1024 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
454910	Mouse IL-23	30 pg/mL	30–1920 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
455010	Mouse MCP-1	20 pg/mL	20–1280 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
455210	Mouse TNF- α	15 pg/mL	15–960 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal

Rat Cytokine Kits

455410	Rat IFN- γ	100 pg/mL	100–6400 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
455510	Rat IL-1 β	60 pg/mL	60–3840 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
455610	Rat IL-6	60 pg/mL	60–3840 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
455710	Rat IL-10	60 pg/mL	60–3840 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal
455810	Rat TNF- α	20 pg/mL	20–1280 pg/mL	96-well microplate	100 µL	3 hr 45 minutes	450 nm	-20°C for standard, antibody, Avidin-HRP, 4°C for all other kit components	Monoclonal

Life Science ELISA: Cross-Reactivity Data

Cyclic AMP

Cyclic AMP	100.0%
Cyclic GMP	0.07%
Adenosine	<0.01%
Adenine	<0.01%
AMP	<0.01%
ADP	<0.01%
ATP	<0.01%
Guanine	<0.01%
GMP	<0.01%
GTP	<0.01%

Note: Standards were acetylated before testing.

Histamine

Histamine	100.0%
Histidine	0.008%
Cadaverine	0.003%
Tyramine	<0.01%
Spermine	<0.01%
Putrescine	<0.01%
Trimethylamine	<0.01%

Lipoxin A₄

Lipoxin A ₄	100.0%
15-epi-Lipoxin A ₄	24.0%
5(S), 6(R)-DiHETE	5.0%
Lipoxin B ₄	1.0%
15-HETE	0.10%
5-HETE	<0.10%
12-HETE	<0.10%
Leukotriene B ₄	<0.01%
Leukotriene C ₄	<0.01%
Leukotriene D ₄	<0.01%
Leukotriene E ₄	<0.01%

15-epi-Lipoxin A₄

15-epi-Lipoxin ₄	100.0%
Lipoxin A ₄	3.0%
15(R)-HETE	0.8%
5(S)-HETE	<0.01%
12(S)-HETE	<0.01%
15(S)-HETE	<0.01%

Androstenedione

Androstenedione	100.0%
Estrone	1.5%
Pregnenolone	0.20%
Deoxycorticosterone	0.16%
Estrone-3-sulfate	0.16%
17β-Estradiol	0.08%
Hydrocortisone	0.08%
Prednisolone	0.08%
Estriol	0.01%

Corticosterone

Corticosterone	100.0%
Deoxycorticosterone	38.0%
6-Hydroxycorticosterone	19.0%
Progesterone	5.1%
Tetrahydrocorticosterone	2.7%
Prednisolone	1.5%
Cortisol	1.1%
Pregnenolone	0.85%
11-Epicorticosterone	0.78%
Cortisone	0.27%
21-Desoxycortisol	0.24%
d-Aldosterone	0.13%
Testosterone	0.12%
17α-Hydroxyprogesterone	0.12%
Prednisone	0.10%

Dexamethasone	0.03%
Cholesterol	<0.01%
Estradiol	<0.01%
Estriol	<0.01%

Cortisol

Cortisol	100.0%
Prednisolone	47.4%
Cortisone	15.7%
11-Deoxycortisol	15.0%
Prednisone	7.83%
Corticosterone	4.81%
6β-Hydroxycortisol	1.37%
17-Hydroxyprogesterone	1.36%
Deoxycorticosterone	0.94%
Progesterone	0.06%
Betamethasone	0.05%
Dehydroepiandrosterone	0.03%
Dexamethasone	0.03%
Beclomethasone	0.01%
d-Aldosterone	0.01%
Testosterone	0.01%
17α-Hydroxypregnenolone	<0.01%
Androstenedione	<0.01%
Cholesterol	<0.01%
Estradiol	<0.01%
Estriol	<0.01%
Estrone	<0.01%
Pregnenolone	<0.01%

Estradiol

17β-Estradiol	100.0%
Testosterone	1.0%
Estriol	0.41%
Estrone	0.10%
Dehydroepiandrosterone	0.03%
Aldosterone	<0.02%
Androstenedione	<0.02%
Corticosterone	<0.02%
Cortisol	<0.02%
Cortisone	<0.02%
Deoxycorticosterone	<0.02%
17-Hydroxyprogesterone	<0.02%
Pregnenolone	<0.02%
Progesterone	<0.02%
17α-Ethinylestradiol	<0.01%
β-Estradiol 17-(β-d-Glucuronide)	<0.01%

Estriol

Estriol	100.0%
17β-Estradiol	2.0%
Estrone	2.0%
Androstene	0.02%
Estrone-3-Sulfate	0.02%
Testosterone	0.02%
Androstenedione	<0.01%
Dehydroisoandrosterone	<0.01%
Deoxycorticosterone	<0.01%
Hydrocortisone	<0.01%
Prednisolone	<0.01%
Pregnenolone	<0.01%
Progesterone	<0.01%

Testosterone

Testosterone	100.0%
Dihydrotestosterone	100.0%
Testosterone Glucuronide	16.12%
Androstenedione	0.86%
Bolandiol	0.86%
Testosterone Enanthate	0.13%

Estriol	0.10%
Testosterone Benzoate	0.10%
Estradiol	0.05%
Dehydroepiandrosterone	0.04%
Testosterone Propionate	0.04%
Deoxycorticosterone	0.03%
Testosterone 17β-Cypionate	0.02%
Aldosterone	<0.01%
Corticosterone	<0.01%
Cortisol	<0.01%
Cortisone	<0.01%
Estrone	<0.01%
17-Hydroxyprogesterone	<0.01%
Pregnenolone	<0.01%
Progesterone	<0.01%

Progesterone

Progesterone	100.0%
Deoxycorticosterone	2.5%
Corticosterone	2.0%
Pregnenolone	2.0%
Androstenedione	1.0%
17-Hydroxyprogesterone	0.40%
Testosterone	0.29%
Cortisol	0.20%
Cortisone	0.20%
Dehydroepiandrosterone	0.20%
Estradiol	0.20%
Estriol	0.20%
Estrone	0.20%

Progesterone (Ultra)

Progesterone	100.0%
Deoxycorticosterone	29.2%
Pregnenolone	15.7%
17α-Hydroxyprogesterone	13.2%
Androstenedione	2.7%
Testosterone	1.8%
Dehydroepiandrosterone	0.85%
Estrone	0.82%
Corticosterone	0.69%
d-Aldosterone	0.43%
Cortisol	0.09%
Cortisone	0.06%
Estradiol	0.01%
Estriol	<0.01%

Leukotriene B₄

Leukotriene B ₄	100.0%
6-trans-LTB ₄	25.0%
Leukotriene B ₅	14.6%
5(S), 12(S) DiHETE	6.0%
Leukotriene D ₄	0.96%
20-hydroxy-LTB ₄	0.50%
Leukotriene E ₄	0.30%
Leukotriene C ₄	0.20%
5(S)HETE	0.15%
20-Carboxy-LTB ₄	<0.10%
Arachidonic acid	<0.10%
12(S)HETE	<0.10%
12(R)HETE	<0.10%
15-HETE	<0.01%
Prostaglandin A ₂	<0.01%
Prostaglandin B ₂	<0.01%
Prostaglandin D ₂	<0.01%
Prostaglandin E ₂	<0.01%
Prostaglandin F _{2α}	<0.01%
6-keto-Prostaglandin F _{1α}	<0.01%
Thromboxane B ₂	<0.01%

Leukotriene C₄

Leukotriene C ₄	100.0%
Leukotriene D ₄	14.0%
Leukotriene E ₄	7.8%
Leukotriene B ₄	<0.01%
Prostaglandin A ₂	<0.01%
Prostaglandin B ₂	<0.01%
Prostaglandin D ₂	<0.01%
Prostaglandin E ₂	<0.01%
Prostaglandin F _{2α}	<0.01%
6-keto-Prostaglandin F _{1α}	<0.01%
5-HETE.....	<0.01%
12-HETE.....	<0.01%
15-HETE.....	<0.01%
6-trans-Leukotriene B ₄	<0.01%
20-OH-Leukotriene B ₄	<0.01%
Thromboxane B ₂	<0.01%

Leukotriene C₄/D₄/E₄

Leukotriene C ₄	100.0%
Leukotriene D ₄	80.0%
Leukotriene E ₄	80.0%
Leukotriene A ₄	2.0%
Leukotriene B ₄	<1.0%
Prostaglandin B ₂	<0.01%
Prostaglandin D ₂	<0.01%
Prostaglandin E ₂	<0.01%
Prostaglandin F _{2α}	<0.01%
6-keto-Prostaglandin F _{1α}	<0.01%
5-HETE.....	<0.01%
12-HETE.....	<0.01%
15-HETE.....	<0.01%
6-trans-Leukotriene B ₄	<0.01%
20-OH-Leukotriene B ₄	<0.01%
Thromboxane B ₂	<0.01%

Prostaglandin E₂

Prostaglandin E ₂	100.0%
Prostaglandin A ₁	500.0%
Prostaglandin A ₂	450.0%
Prostaglandin B ₁	760.0%
Prostaglandin B ₂	1000.0%
Prostaglandin E ₁	90.0%
6-keto-Prostaglandin E ₁	40.0%
Prostaglandin E ₃	<0.01%
Prostaglandin F _{1α}	<0.01%
13,14-dihydro-15-keto-Prostaglandin F _{2α}	<0.01%
Prostaglandin D ₂	<0.01%
11β-Prostaglandin F _{2α}	<0.01%
6-keto-Prostaglandin F _{1α}	<0.01%
Leukotriene B ₄	<0.01%
15-keto-Prostaglandin F _{2α}	<0.01%
Prostaglandin F _{2α}	<0.01%
11-dehydro-Thromboxane B ₂	<0.01%
Thromboxane B ₂	<0.01%

Prostaglandin E₂ (Monoclonal)

Prostaglandin E ₂	100.0%
Prostaglandin B ₁	63.0%
Prostaglandin E ₃	52.0%
Prostaglandin E ₁	50.0%
Prostaglandin B ₂	2.65%
6-keto-Prostaglandin E ₁	0.91%
Prostaglandin A ₁	0.78%
Prostaglandin A ₂	0.30%
Prostaglandin F _{1α}	0.13%
Prostaglandin F _{2α}	0.06%
Leukotriene B ₄	0.02%
Prostaglandin B ₂	0.01%

6-keto-Prostaglandin F _{1α}	0.01%
13,14-dihydro-15-keto-Prostaglandin F _{2α}	0.01%
Tetranor PGEM.....	<0.01%

Prostaglandin F_{2α}

Prostaglandin F _{2α}	100.0%
Prostaglandin F _{1α}	90.0%
Thromboxane B ₂	3.83%
6-keto-Prostaglandin F _{1α}	3.05%
2,3-dinor-6-keto-Prostaglandin F _{1α}	0.82%
11β-Prostaglandin F _{2α}	0.39%
8-Iso-Prostaglandin F _{2α}	0.24%
15-keto-Prostaglandin F _{2α}	0.20%
13,14-dihydro-15-keto-Prostaglandin F _{2α}	0.05%
Prostaglandin D ₂	0.05%
Prostaglandin E ₁	0.01%
11-dehydro-Thromboxane B ₂	<0.01%
6-keto-Prostaglandin E ₁	<0.01%
Leukotriene B ₄	<0.01%
Prostaglandin A ₁	<0.01%
Prostaglandin A ₂	<0.01%
Prostaglandin B ₁	<0.01%
Prostaglandin B ₂	<0.01%
Prostaglandin E ₂	<0.01%
Prostaglandin E ₃	<0.01%
Tetranor PGFM.....	<0.01%

6-keto-Prostaglandin F_{1α}

6-keto-Prostaglandin F _{1α}	100.0%
Prostaglandin F _{1α}	76.77%
2,3-dinor-6-keto-Prostaglandin F _{1α}	64.48%
6-keto-Prostaglandin E ₁	49.92%
Prostaglandin F _{2α}	29.94%
Prostaglandin E ₂	11.84%
Prostaglandin D ₂	8.36%
11-dehydro-Thromboxane B ₂	1.07%
15-keto-Prostaglandin F _{2α}	0.66%
13,14-dihydro-15-keto-Prostaglandin F _{2α}	0.48%
Prostaglandin A ₂	0.30%
Prostaglandin A ₁	0.25%
Thromboxane B ₂	0.15%
Prostaglandin B ₂	0.02%
Prostaglandin B ₁	0.02%
Leukotriene B ₄	0.01%

11β-Prostaglandin F_{2α}

11β-Prostaglandin F _{2α}	100.0%
Prostaglandin F _{2α}	0.24%
Prostaglandin E ₂	0.21%
Thromboxane B ₂	0.21%
Prostaglandin D ₂	0.01%
Leukotriene B ₄	<0.01%
Prostaglandin A ₁	<0.01%
Prostaglandin A ₂	<0.01%
Prostaglandin B ₁	<0.01%
Prostaglandin B ₂	<0.01%
Prostaglandin F _{1α}	<0.01%
6-keto-Prostaglandin E ₁	<0.01%
6-keto-Prostaglandin F _{1α}	<0.01%
13,14-dihydro-15-keto-Prostaglandin F _{2α}	<0.01%
15-keto-Prostaglandin F _{2α}	<0.01%
11-dehydro-Thromboxane B ₂	<0.01%

13,14-dihydro-15-keto-Prostaglandin F_{2α}

13,14-dihydro-15-keto-Prostaglandin F _{2α}	100.0%
15-keto-dihydro-Prostaglandin E ₂	1.0%
15-keto-Prostaglandin F _{2α}	0.13%
Leukotriene B ₄	<0.01%
Prostaglandin A ₁	<0.01%
Prostaglandin A ₂	<0.01%
Prostaglandin B ₁	<0.01%
Prostaglandin B ₂	<0.01%

Prostaglandin D ₂	<0.01%
Prostaglandin E ₂	<0.01%
Prostaglandin F _{1α}	<0.01%
Prostaglandin F _{2α}	<0.01%
6-keto-Prostaglandin E ₁	<0.01%
6-keto-Prostaglandin F _{1α}	<0.01%
15-keto-Prostaglandin E ₂	<0.01%
Thromboxane B ₂	<0.01%
11-dehydro-Thromboxane B ₂	<0.01%

Thromboxane B₂

Thromboxane B ₂	100.0%
2,3-dinor-Thromboxane B ₂	30.0%
Prostaglandin D ₂	1.21%
Prostaglandin E ₂	0.08%
11-dehydro-Thromboxane B ₂	0.07%
Prostaglandin F _{2α}	0.06%
6-keto-Prostaglandin F _{1α}	0.05%
Prostaglandin F _{1α}	0.02%
Arachidonic acid.....	<0.01%
Leukotriene B ₄	<0.01%
Prostaglandin A ₂	<0.01%
Prostaglandin B ₂	<0.01%
13,14-dihydro-15-keto-Prostaglandin F _{2α}	<0.01%

11-dehydro-Thromboxane B₂

11-dehydro-Thromboxane B ₂	100.0%
11-dehydro-Thromboxane B ₃	42.0%
11-dehydro-2,3-dinor-Thromboxane B ₂	24.0%
Prostaglandin D ₂	0.9%
2,3-dinor-Thromboxane B ₂	0.5%
11β-Prostaglandin F _{2α}	0.3%
Thromboxane B ₂	0.08%
Prostaglandin A ₂	0.08%
Prostaglandin A ₁	0.05%
Leukotriene B ₄	0.04%
Leukotriene C ₄	0.04%
Prostaglandin B ₂	0.03%
Prostaglandin E ₃	0.03%
Thromboxane B ₃	0.03%
Prostaglandin B ₁	0.02%
Prostaglandin E ₁	0.02%
2,3-dinor-6-keto-Prostaglandin F _{1α}	0.02%
6-keto-Prostaglandin F _{1α}	0.02%
13,14-dihydro-15-keto-Prostaglandin F _{2α}	<0.01%
15-keto-Prostaglandin F _{2α}	<0.01%
6-keto-Prostaglandin E ₁	<0.01%
Leukotriene E ₄	<0.01%
Prostaglandin F _{1α}	<0.01%
Prostaglandin F _{2α}	<0.01%

15-Isoprostane F_{2t}

15-Isoprostane F _{2t}	100.0%
9α,11β-Prostaglandin F _{2α}	4.1%
13,14-dihydro-15-keto-PGF _{2α}	3.0%
9β,11α-Prostaglandin F _{2α}	<0.01%
Prostaglandin F _{2α}	<0.01%
6-keto-Prostaglandin F _{1α}	<0.01%
Prostaglandin E ₂	<0.01%
Prostaglandin D ₂	<0.01%
Arachidonic acid.....	<0.01%

Urinary Isoprostane

15-Isoprostane F _{2t}	100.0%
9α,11β-Prostaglandin F _{2α}	4.1%
13,14-dihydro-15-keto-PGF _{2α}	3.0%
9β,11α-Prostaglandin F _{2α}	<0.01%
Prostaglandin F _{2α}	<0.01%
6-keto-Prostaglandin F _{1α}	<0.01%
Prostaglandin E ₂	<0.01%
Prostaglandin D ₂	<0.01%
Arachidonic acid.....	<0.01%

Forensic Toxicology

Neogen's 30 years of experience in manufacturing ELISA test kits exemplifies our commitment and dedication to producing simple, sensitive solutions for drug detection. Our forensic drug detection ELISA test kits are used worldwide by research and forensic toxicology laboratories.

Neogen's test kits are qualitative one-step kits designed as screening devices in forensic samples. The kits are intended for forensic use only. It is recommended that all suspect samples be confirmed by a quantitative method such as GC/MS. Our easy-to-use protocols are designed for high and low volume laboratories as they can be run manually or easily automated on a wide range of immunoassay instruments. Neogen's experienced technical support staff is available to discuss your testing and automation requirements to find a system that will work best for the desired applications.

Neogen's Forensic Toxicology Advantages

- More than 100 drug test kits available
- Detectability of over 300 drugs and metabolites
- Validated for whole blood, urine, hair, oral fluid, serum, plasma, meconium, breast milk and others
- High sensitivity
- Excellent reproducibility
- Automated and semi-automated equipment
- Reagent rental programs
- Custom single-line reporting software
- 30 years of ELISA experience



Oral Fluid Testing

Neogen's oral fluid product line includes the NeoSal™ Oral Fluid Collection System and a panel of oral fluid ELISA test kits optimized with the NeoSal device. The NeoSal Oral Fluid Collection System is designed for maximum ease-of-use when collecting and testing oral fluid samples for drugs of abuse.

NeoSal Key Features

- Sample Volume Adequacy Indicator (SVAI)
- Stimulant-free collection pad
- Quick collection, typically 1 to 2 minutes
- Unique handle fits directly into buffer tube and prevents contamination
- No additional sample processing required
- Automation friendly, fits onto 12 X 75 sample racks
- Consistent drug recovery



NeoSal Oral Fluid
Collection System

NeoSal 25-pack product #128101-25

We also offer the UltraSal-2, a split-specimen oral fluid collection device that can be used for multiple testing applications.

UltraSal-2 Key Features

- Neat saliva collection
- Graduated volume indicator
- Split-sample collection
- Ideal for research applications



UltraSal-2 50-pack product #US2-50

ELISA Test Kits	Product No.	ELISA Test Kits	Product No.	ELISA Test Kits	Product No.
6-AM ★○	134019	Glycopyrrolate	102019	Phenylbutazone	104719-1
16β-Hydroxystanozolol	103519	Guanabenz	109219	Phenytoin ○	132119
Acetaminophen ○	132419	Haloperidol Metabolites	102119	Procaine	103219
Alfentanil	103619	Hydrochlorothiazide	180319	Promazine Group	100719
Amphetamine	105219-1	Hydromorphone ○	132219	Propoxyphene ○	131119
Amphetamine Specific ○◇	132319	Hydroxyzine	105719	Propranolol	107319
Amphetamine Ultra ○◇	130819	Ibuprofen	180219	Pyrilamine	105919
Anileridine	105519	lpratropium/Atropine	107119	Ractopamine	106519
Apomorphine/Apocodeine	109119	Isoxsuprine	102219	Reserpine	104819
Azaperone	100919	Ketamine ○	131719	Salicylates ○	133619
Barbiturate Group ○◇	130619	Ketorolac	108219	Sertraline ○	131319
Benzodiazepine Group ○◇		Levallophan	105619	Stanozolol	103319
(Oxazepam/Clonazepam)	130119	Lidocaine	102319	Sufentanil	104919
Benzylpiperazine	108319	Lofentanil	106719-1	Sulfamethazine	103419
Boldenone	101019	LSD ○	102419	Synthetic Cannabinoids (JWH-018) ○	133519
Bronchodilator Group	100319	Mazindol/Mazindol Metabolites	130219	Synthetic Cannabinoids (JWH-250) ★○	133719
Bumetanide	103719-1	Meperidine ○	102519	Synthetic Cannabinoids	
Buprenorphine ○	131919	Mephentermine	131219	(UR-144/XLR-11) ★○	133919
Buspirone*	108719	Mepivacaine	107219	Synthetic Cathinones (Methcathinone)	181819
Butorphanol	101119	Meprobamate ○	102719	THC ○◇	131019
Caffeine/Pentoxifylline	106419	Metaraminol	133419	Theophylline	106019
Carfentanil	103919	Methadone ○	107919	Tramadol	131819
Carisoprodol ○	132519	Methadone/LAAM ○	131619	Trazodone ○	132819
Carprofen	181119	Methamphetamine/MDMA ○◇	132919	Trenbolone	109719
Celecoxib	180719	Methocarbamol	130919	Triamcinolone Acetonide	105119
Citalopram ○	132719	Methotrexate	108019	Tricyclics Group ○	132019
Clenbuterol	101219	Methylphenidate ○	107519	Zolpidem ○	132619
Clonidine/Romifidine	180119	Methylprednisolone	133219	Zomepirac	109619
Cocaine/Benzoylcegonine ○◇	130319	Naltrexone/Nalbuphine ○	104519	Zopiclone/Eszopiclone ○	133819
Corticosteroid Group	100419	Nandrolone	133019		
Cotinine (Serum)	CT-96-S	Nikethamide	104619		
Cotinine (Urine)	CT-96-U	Opiate Group ○◇	109919		
Creatinine	133319	Oxycodone/Oxymorphone ○◇	130419		
Cromoglycate	105819	Pentazocine	130719		
Dantrolene	106319	Phencyclidine (PCP) ○◇	103119		
Dermorphin ★	181919		130519		
Detomidine	181319				
Dexamethasone	101519				
Dextromethorphan ○	131419				
Diprenorphine*	106119				
Doxapram	106219				
Droperidol	101619				
Ethacrynic Acid	101719-1				
Etorphine	101819				
Fenspiride*	108419				
Fentanil Group	100519				
Fentanyl ○	131519				
Fexofenadine/Terfenadine*	181419				
Flunitrazepam	109519				
Flunixin	101919				
Fluoxetine	107619				
Fluphenazine	104119				
Furosemide	104219-1				

FOR FORENSIC USE ONLY

★ *New kits*

○ *Ready-to-use (RTU) assay*

◇ *Matrix specific calibrators included*

Other kits include positive and negative controls

Neogen's ready-to-use or RTU test kits require no pre-dilution of conjugate prior to assay set-up.



Neogen's Ready-to-Use (RTU) Forensic Assays

Neogen offers forensic assays that are ready-to-use and that do not require pre-dilution of reagents prior to assay setup. Matrix specific quantitative calibrators or qualitative positive or negative controls are assay-specific. See the product list or contact a forensic representative for details regarding a specific kit.

* Minimum lead time and quantities required, contact Neogen for more details.

Substrates and Reagents

Substrates and Reagents

Neogen offers an expanding line of substrates and reagents to meet customers' immunoassay needs. The substrates are available for use with horseradish peroxidase (HRP) and alkaline phosphatase (AP) based microwell and membrane assays. Neogen's substrates offer excellent sensitivity, stability and lot-to-lot consistency that make them ideal for inclusion in commercial immunoassay test kits or for individual in-house assay projects. Neogen's immunoassay reagents include stop solution and buffers.

Our broad line of substrates and reagents offers the advantages of purchasing multiple formulations from one manufacturer, allowing for larger discounts, uniform delivery schedules and simplified purchasing procedures.

Stability/Shelf Life

- Ranging from 18–48 months, the stability of our substrates is under constant evaluation.

Lot-to-Lot Consistency

- Each substrate formulation has designated release criteria. These specifications must be met before the substrate is approved.
- Each substrate batch has 6 hours of testing requirements and batch record review conducted.
- A COA is issued for each approved substrate batch and is included with each substrate shipment.

Custom Fill and Packaging Services

- Neogen offers bulk packaging and custom fill options to meet customer requirements.
- Our manufacturing department can customize product packaging with customer labels or other packaging requirements.

ISO-Certified Manufacturer

- This system improves Neogen's efficiency and effectiveness and ensures our customers receive consistent high quality products.

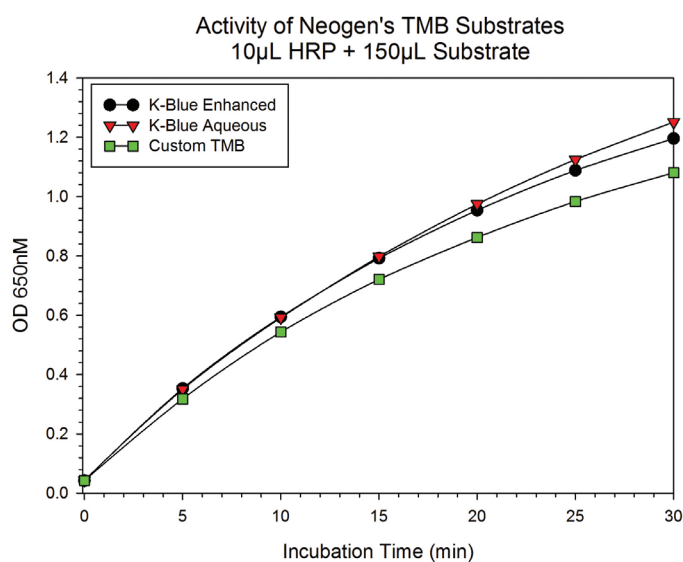


Colorimetric Substrates

TMB Microwell Substrates

Neogen recognizes that one TMB microwell substrate formulation will not meet the specifications of all HRP-based immunoassays. Therefore, Neogen offers multiple unique one-bottle TMB microwell colorimetric substrate formulations to meet specific requirements for different assay systems. If you require a specific activity level, please contact us about customizing a formula that better fits your needs.

All of Neogen's TMB microwell substrate formulations are one-bottle stabilized chromogenic substrates for use with horseradish peroxidase immunoassays. The formulations contain 3,3',5,5' TMB and hydrogen peroxide (H₂O₂) in a ready-to-use format with long-term stability. Our TMB substrates turn a deep blue color in the presence of peroxidase labeled conjugate. These substrates are not applicable for use with assays requiring a precipitating substrate. Neogen substrates have common characteristics of low background, excellent lot-to-lot consistency, and contain no DMF or DMSO.



*Alert® K-Blue Aqueous has similar activity to K-Blue Aqueous

Colorimetric Substrates

Product	Activity	Shelf Life	Standard Features	Unique Features	Available Sizes
Enhanced K-Blue	High activity	48 months when stored at 4°C	<ul style="list-style-type: none"> • RTU (ready-to-use) • Low background • High consistency between lots 	<ul style="list-style-type: none"> • Longest shelf-life of Neogen TMB substrates 	200 mL 500 mL 1 L 20 L (1 x 20 L)
K-Blue Aqueous	High activity: Kinetics similar to Enhanced K-Blue	36 months when stored at 4°C	<ul style="list-style-type: none"> • RTU (ready-to-use) • Low background • High consistency between lots 	<ul style="list-style-type: none"> • 100% solvent free • Ideal when working under strict regulatory requirements 	200 mL 500 mL 1 L 20 L (1 x 20 L)
Alert K-Blue Aqueous	High activity: Kinetics similar to K-Blue Aqueous	36 months when stored at 4°C	<ul style="list-style-type: none"> • RTU (ready-to-use) • Low background • High consistency between lots 	<ul style="list-style-type: none"> • Clearly indicates when substrate and acid stop have been added to the wells (turns pink) • Ideal for sandwich-based HRP assays 	200 mL 500 mL 1 L 20 L (1 x 20 L)
Custom TMB	Lower activity: 20–30% Reduced activity of Enhanced K-Blue	36 months when stored at 4°C	<ul style="list-style-type: none"> • RTU (ready-to-use) • Low background • High consistency between lots 	<ul style="list-style-type: none"> • Ideal for assays requiring a less active substrate 	200 mL 500 mL 1 L 20 L (1 x 20 L)

Substrates & Reagents

Additional Colorimetric Substrates

Product	Application	Shelf Life	Standard Features	Available Sizes
ABTS	HRP-Microwell	36 months when stored at 4°C	<ul style="list-style-type: none"> • High consistency between lots • Easy-to-use, one-bottle solution • Produces a soluble blue-green reaction 	25 mL 100 mL 1 L 5 L (1 x 5 L)
TMB Membrane	HRP-Membrane	48 months when stored at 2–8°C or 24 months when stored at 15–25°C	<ul style="list-style-type: none"> • High consistency between lots • Easy-to-use, one-bottle solution • Produces an insoluble, permanent dark blue reaction 	25 mL 100 mL 1 L 5 L (1 x 5 L)
K-Gold PNPP	AP-Microwell	30 months when stored at 4°C	<ul style="list-style-type: none"> • High activity • Low background • High consistency between lots • Easy-to-use, one-bottle solution ideal for automation 	200 mL 500 mL 1 L 20 L (1 x 20 L)
BCIP/NBT (Blue)	AP-Membrane	36 months when stored at 2–25°C	<ul style="list-style-type: none"> • Low background • High consistency between lots • Easy-to-use, one-bottle solution • Produces an insoluble, permanent dark blue reaction 	25 mL 100 mL 1 L 5 L (1 x 5 L)
BCIP/NBT (Purple)	AP-Membrane	36 months when stored at 2–25°C	<ul style="list-style-type: none"> • Low background • High consistency between lots • Easy-to-use, one-bottle solution • Produces an insoluble, permanent dark purple reaction 	25 mL 100 mL 1 L 5 L (1 x 5 L)

Reagents

Product	Application	Shelf Life	Available Sizes
Red Stop Solution	Red Stop solution is a non-acidic, ready-to-use stopping reagent for use with Neogen's TMB substrates. It produces a dark purple-pink color for a minimum of 2 hours when added to the reaction.	12 months when stored at 4°C	200 mL 500 mL 1 L
EIA Buffer	EIA Buffer is a ready-to-use buffer designed to dilute enzyme conjugates, standards and samples.	12 months when stored at 4°C	500 mL 1 L
Wash Buffer	Neogen's Wash Buffer is a concentrated (10 x) buffer that once diluted with deionized water can be used to wash all unbound enzyme conjugate, samples and standards from microplates.	12 months when stored at 4°C	500 mL 1 L
NeoSal Buffer	NeoSal Buffer is designed to stabilize oral fluid specimens following collection and during transit, it can also be used to dilute additional oral fluid samples in preparation for immunoassay.	18 months when stored at 4°C	500 mL 1L

Custom Manufacturing and Development

An additional service available to Neogen's customers is the custom development and manufacture of assays and related components. If there is an ELISA kit or other product you would like to see developed, please let us know. We want to supply you with high quality products to meet your testing needs.

Chemiluminescent Substrates

Microwell and Membrane HRP Applications

Neogen offers multiple luminol-based chemiluminescent substrate formulations for microwell and membrane applications for the ultimate detection of horseradish peroxidase. Neogen's substrates meet a wide range of detection requirements with features such as:

Chemiluminescent HRP Substrates

Product	Application	Shelf Life	Activity/Sensitivity	Standard Features	Available Sizes
Chemiluminescent Ultra	Microwell and membrane	18 months when stored at 4°C	Maximum Sensitivity	<ul style="list-style-type: none"> Luminol-based chemistry Two component system 	20 mL (2 X 10 mL) 200 mL (2 x 100 mL) 500 mL (2 x 250 mL) 1 L (2 x 500 mL)
Chemiluminescent Elite Plus	Microwell and membrane	18 months when stored at 4°C	High Sensitivity	<ul style="list-style-type: none"> Luminol-based chemistry Two component system 	20 mL (2 X 10 mL) 200 mL (2 x 100 mL) 500 mL (2 x 250 mL) 1 L (2 x 500 mL)
Chemiluminescent Elite	Microwell and membrane	18 months when stored at 4°C	High Sensitivity	<ul style="list-style-type: none"> Luminol-based chemistry Two component system 	20 mL (2 X 10 mL) 200 mL (2 x 100 mL) 500 mL (2 x 250 mL) 1 L (2 x 500 mL)

Microwell and Membrane AP Applications

Neogen also offers ultra-sensitive 1,2-dioxetane-based chemiluminescent formulations for the detection of alkaline phosphatase in microwell and membrane applications. These formulations offer the following features:

Chemiluminescent AP Substrates

Product	Application	Shelf Life	Activity/Sensitivity	Standard Features	Available Sizes
Chemiluminescent AP Select Plus 450	Microwell and membrane	24 months when stored at 4°C	Maximum Sensitivity	<ul style="list-style-type: none"> 1,2-Dioxetane-based chemistry One bottle solution 	10 mL 200 mL 500 mL 1 L
Chemiluminescent AP Select Plus 540	Microwell and membrane	24 months when stored at 4°C	Maximum Sensitivity	<ul style="list-style-type: none"> 1,2-Dioxetane-based chemistry One bottle solution 	10 mL 200 mL 500 mL 1 L
Chemiluminescent AP Select 450	Microwell and membrane	24 months when stored at 4°C	High Sensitivity	<ul style="list-style-type: none"> 1,2-Dioxetane-based chemistry One bottle solution 	10 mL 200 mL 500 mL 1 L
Chemiluminescent AP Select 540	Microwell and membrane	24 months when stored at 4°C	High Sensitivity	<ul style="list-style-type: none"> 1,2-Dioxetane-based chemistry One bottle solution 	10 mL 200 mL 500 mL 1 L

Custom Fill and Packaging Services

Custom Fill and Packaging Services

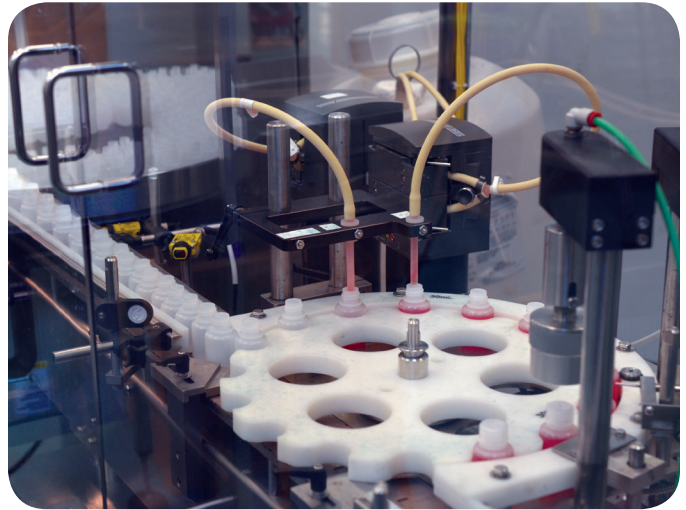
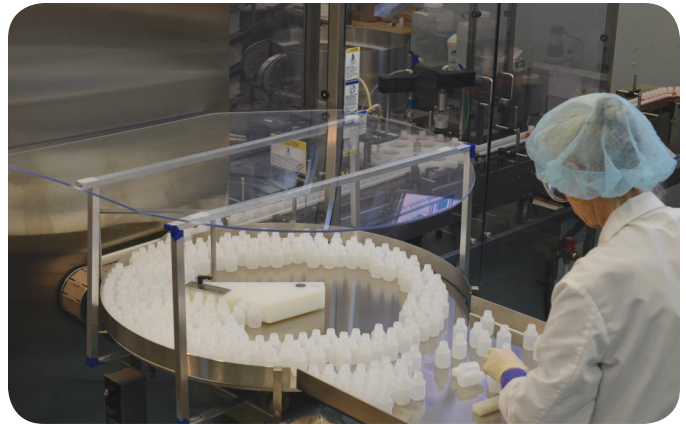
Neogen can package substrates and reagents in custom bottle sizes and volume fills to meet your specific packaging requirements.

Our capabilities include:

- Fill volumes ranging from 6 mL to 55 L
- Bottle sizes range from 15 mL bottles to 55 L containers
- Unlabeled and custom labeling options available

Neogen utilizes a fully automated filling system for substrates and reagents that offers the following benefits as compared to manual or semi-automated bottle filling processes:

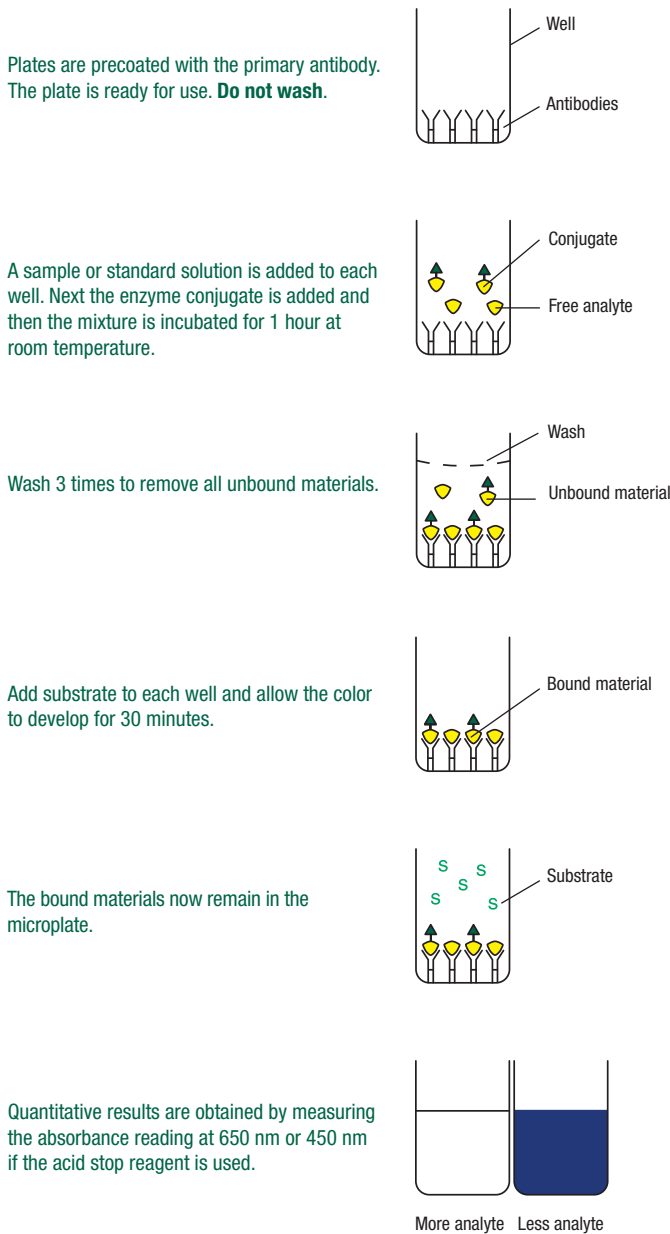
- Reduced risk of contamination
- Ensures long-term stability of the substrate
- Ensures precise volume fill per bottle and reduces volume variability bottle-to-bottle
- Enables customers to specify preferred fill volumes if the standard volumes do not meet their requirements
- Automated bottle labeling and printing capabilities providing custom options for labeling bottles with Neogen provided labels or customer designed labels
- Automated capping of bottles to ensure consistent application and customer torque requirements



Summary of Competitive Assays

Assay theory

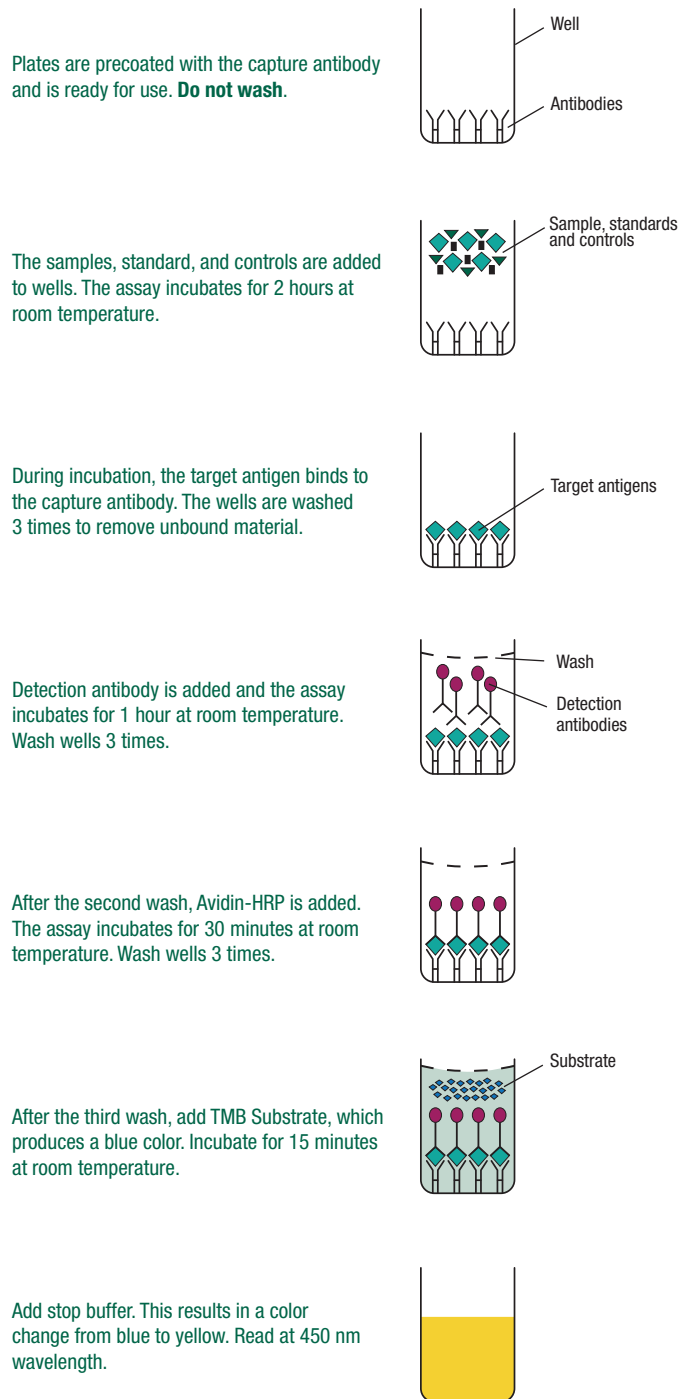
A direct competitive ELISA operates on the basis of competition between the horseradish peroxidase (HRP) enzyme conjugate and the analyte in the sample for a limited number of specific binding sites on a precoated microplate.



Summary of Sandwich Assays

Assay theory

A solid phase sandwich ELISA utilizes a capture antibody specific for a target antigen that is coated on a 96-well plate. Sequential additions of the antigen and a secondary antibody produce an antibody-antigen-antibody "sandwich."



Technical Support

Unexpected results in an assay can be attributed to multiple factors. The following are common examples of unexpected results with possible explanations.

1. Extreme deep blue color development with samples and standards.

- The plate was not properly washed (3 x 300 μ L) with the diluted wash buffer. If using an automated washer, ensure the instrument is working correctly, and increase wash cycle to 5 x 300 μ L.
- The enzyme conjugate concentrate was incorrectly diluted.

2. Extremely low color development with samples and standards.

- The wash buffer was not diluted correctly before use.
- A poor quality of water was used to dilute the wash buffer. Deionized water should be used for dilutions.
- The enzyme conjugate concentrate was incorrectly diluted.
- The kit prematurely deteriorated, possibly from adverse shipping and storage conditions. Investigate the condition of the kit when it was received and how it was stored prior to use. Proper storage conditions are listed in the product insert.
- The kit has expired. Check the expiration dates on all kit components. No component of the kit should be used past the expiration date. Do not mix any reagents or components of one kit with the reagents or components of another kit.
- Contamination. Always use aseptic techniques when opening and removing reagents from vials and bottles. Keep the plate covered except when adding reagents, washing, or reading. Always use different pipette tips for each reagent. When pipetting, do not allow the pipette tip to touch any of the reagents already in the well.

3. No color development with samples and standards

- Improper dilution of enzyme conjugate concentrate.
- The kit has expired. Check the expiration dates on the test kits and reagents. No components of the kit should be used past the expiration date. Do not mix any reagents or components of one kit with the reagents or components of another kit.

4. Little to no displacement with the standard curve.

- Incorrect dilution of standards. Refer to the dilution scheme in the product insert.
- Contamination.
- The plate was not properly washed (3 x 300 μ L) with the diluted wash buffer. If using an automated washer, ensure the instrument is working correctly, and increase wash cycle to 5 x 300 μ L.
- Standard has deteriorated prematurely. Contact a Neogen representative and provide them with the kit name, lot number, expiration date, and the OD readings for further investigation.

5. The standard curve performed correctly but the known negative samples gave low color development.

- Samples need to be diluted or extracted to eliminate interference. Refer to the extraction procedure in the product insert.

6. The standard curve performed correctly but the extracted samples produced low color development.

- The concentration of the analyte in the extracted sample is too high. The extracted sample needs to be diluted before running in the assay so the sample OD reading will fit in the standard curve. When a dilution is used, the concentration determined from the standard curve must be multiplied by the dilution factor.
- Inadequate extraction of samples resulting in the presence of a solvent. Refer to the recommended extraction procedure in the product insert.

7. Variability with duplicates.

- Inconsistent and/or inadequate pipetting technique when adding reagents. Improve pipetting technique.
- Inconsistent washing. The wells should be washed 3 x 300 μ L with the diluted wash buffer. If using an automated washer, ensure the instrument is working correctly and increase wash cycle to 5 x 300 μ L.
- Inadequate aspiration during washing. The wells should be aspirated and tapped between each washing. Tap out excess liquid but do not allow wells to dry completely before adding substrate. If using an automated washer, ensure the instrument is working properly.
- Interruption during assay set-up. Have all reagents prepared before assay commences. Reagent addition should be performed in a timely and accurate manner.

Contact Technical Services

For technical assistance, please contact our Technical Services Department at **859/254-1221** or email at **techservice-lifesciences@neogen.com**. Representatives are available Monday through Friday from 8:00 a.m. to 6:00 p.m. Eastern time.

LabLive

LabLive is a training and troubleshooting web service that links you directly with Neogen's technical service experts who know your product. After you schedule a LabLive session, we will mail you a portable webcam you can use to learn new assay techniques or troubleshoot with Neogen experts. It's a personal and interactive experience – like we're right there with you.

- No travel delays
- Easy to schedule
- Effective – live and personal



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