

Definition of Biogenic Amines

Biogenic amine is a chemically imprecise term, which, by convention, includes the catecholamines: Epinephrine (or adrenaline), Norepinephrine (or Noradrenaline) and Dopamine, the indoleamine serotonin, the imidazolamine histamine and compounds closely related to each of these. They are produced by decarboxylation of amino acids. These biogenic amines play key roles in neurotransmission and other signalling functions.

5-Hydroxyindoleacetic acid (5-HIAA)

is the main metabolite of serotonin in the human body. In chemical analysis of urine samples, 5-HIAA is used to determine the body's levels of serotonin.

5-HIAA is an important marker of carcinoid syndrome in small urine samples.

Histamine

is the most important mediator in human and is mostly found in the initial phase of anaphylaxis ("immediate type" allergy). Histamine acts predominantly on smooth muscle and blood vessels.

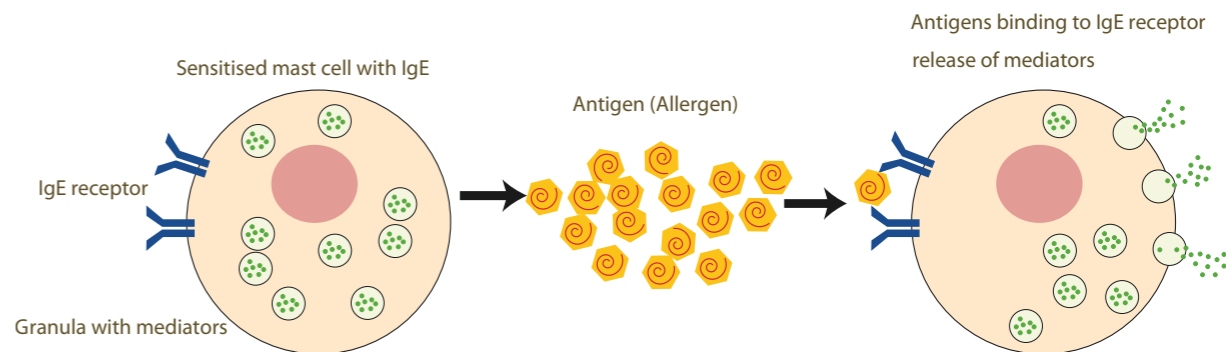
Major effects include widespread arteriolar dilation, local increased capillary permeability by contracting endothelial cells, contraction of nonvascular smooth muscle, bronchoconstriction, chemotaxis for eosinophils, blocking T lymphocyte function and gastric acid secretion.

Melatonin

the major hormone secreted by the pineal gland - is a key modulator of annual and circadian biorhythms. Its circadian profile in body fluids is an excellent marker for the setting of the endogenous clock.

Serotonin

is well established as a neurotransmitter in the central nervous system. Altered concentrations of circulating serotonin have been implicated in several pathologic conditions including chronic tension migraine, schizophrenia, hypertension, Huntington's disease, Duchenne's muscular dystrophy and early acute appendicitis. The determination of serum serotonin levels is of high clinical significance for diagnostic assessment of carcinoid syndrome.



Excellent correlation with the reference method
 No interference by medical drugs
 Wide standard range
 Fast results
 Suitable for all sample types

Melatonin
 Serotonin
 Histamine
 5-HIAA



5-HIAA (5-hydroxyindole acetic acid)	Histamine	Melatonin Direct	Serotonin (Research use only)	Serotonin
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Application

• Carcinoid tumours	• Allergy, scombroid poisoning, Histamine intolerance	• Sleep disorders, psychiatric disorders, burn-out syndrome	• Carcinoid Syndrome, Hypertension, Psychiatric Disorders, adiposity, burn-out syndrome
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Method

ELISA	ELISA	ELISA (Food)	HisQuick Rapid Test	Direct RIA	RIA	ELISA <i>Ultra sensitive or for small sample volumes</i>	ELISA	RIA
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Kit Size

96 tests	96 tests	96 tests	96 tests	100 tests	96 tests	96 tests	100 tests
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Catalog

KAPL10-1900	KAPL10-1000	KAPL10-3100	KAPL20-3000	KIPL3300	KIPL3900	KAPL10-5900	KAPL10-0900	KIPL0900
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Incubation Time

2,5h	Overnight	1,5h	0,25h	Overnight	Overnight	2h	2h
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Sample Type

Spontaneous or 24h Urine	EDTA Plasma, Urine	Beer / Champagne / Cheese / Fish / Milk / Sausage / Wine	Fish	Serum, EDTA Plasma	Saliva	All Biological Fluids	Ultra Dialysates Tissue homogenates, cell cultures, biological fluid	Urine, serum, PFP, PRP, and CSF	Urine, serum, PFP, PRP, and CSF
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Sample Size

50 µL	Plasma: 25 µL Urine: 10 µL	1-10g or 10-20 µL	2 g-50 g	200 µL	600 µL		from 1 to 20 µL	100 µL	25/100 µL
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Standard Range

0,5-50 mg/L	0,3 - 30 ng/mL	Varies with sample size		3 - 1000 pg/mL	1 - 300 pg/mL	30 - 10000 pg/mL	2 - 333 pg/mL	15 - 2500 ng/mL	20 - 2000 ng/mL
<i>Standard Range depends on the sample size tested</i>									

Detection Limit

0,17 mg/L	Urine: 0,25 ng/mL EDTA Plasma: 0,1 ng/mL	0,15 µg/L	Fish meal: 125 ppm	2 pg/mL	1,3 pg/mL	1 pg/sample	PFP, CSF, saliva: 0,3 ng/mL Serum, urine, platelets, tissue extracts, cell culture supernatants: 5 ng/mL	CSF/PFP/Saliva: 0,3 ng/mL Serum/Urine/PRP: 6,7 ng/mL
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Reference Intervals

3-15mg/mL / day	Urine: < 15 ng/mL Plasma: < 1 ng/mL		Day Time: SP: up to 30 pg/mL Sa: <5 pg/mL Night Time: SP: up to 150 pg/mL Sa: > 10 pg/mL		Serum: 80-450 ng/ml (female) Serum: 40-400 ng/ml (male) Urine: 50-250 µg/day PFP: 1.8-7.5 ng/ml Platelets: 215-850 ng/10 ⁹ platelets
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Controls

2 levels	None	2 levels
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Shelf Life

60 weeks	14 weeks	60 weeks	60 weeks	14 weeks
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