

MELATONIN ASSAYS

ELISA FOR PLASMA AND SERUM

ELISA FOR SALIVA (DIRECT)

ADVANTAGES

- Elegant and efficient extraction procedure for serum/plasma samples
- Direct measurement of saliva samples
- Highly specific antisera
- Wide standard ranges, convenient measurement of samples without pre-dilution
- Quality – produced according to DIN EN ISO 13485 and 9001

ANALYTICAL SPECIFICITY of the MELATONIN PLASMA/SERUM ELISA:

Analytical Specificity (Cross Reaction)	Substance	Cross Reactivity %
	5-Methoxy-Tryptophole	1.2
	N-Acetyl-Serotonin	1.2
	5-Methoxy-Tryptamine	2.5
	Cross-reactivity of other substances tested < 0.01 %	

ANALYTICAL SPECIFICITY of the MELATONIN DIRECT SALIVA ELISA:

Analytical Specificity (Cross Reaction)	Substance	Cross Reactivity %
	5-Methoxy-Tryptophole	1.2
	N-Acetyl-Serotonin	1.2
	5-Methoxy-Tryptamine	2.5
	Serotonin	< 0.02
	Cross-reactivity of other substances tested ≤ 0.01 %	

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MELATONIN

BACKGROUND INFORMATION

The pineal gland (corpus pineale) has been called a neuroendocrine transducer because of its important role in photoperiodism. The major hormone of the pineal gland is N-acetyl-5-methoxy-tryptamine or melatonin which is synthesized from the amino acid tryptophane. Melatonin has its highest levels in plasma during nighttime. Its characteristic nocturnal surge appears to encode temporal information such as length of night. Regulation of the melatonin secretion is under neural control. Sympathetic innervation seems to play a major role via its release of noradrenaline. Altered patterns and/or levels of melatonin secretion have been reported to coincide with sleep disorders, jet lag, depression, stress, schizophrenia, hypothalamic amenorrhea, pregnancy, anorexia nervosa, some forms of cancer, immunological disorders as well as control of sexual maturation during puberty.

PRINCIPLE OF THE ASSAYS

The assay procedures follow the basic principle of competitive ELISA whereby there is competition between a biotinylated and a non-biotinylated antigen for a fixed number of antibody binding sites. The amount of biotinylated antigen bound to the antibody is inversely proportional to the analyte concentration of the sample. When the system is in equilibrium, the free biotinylated antigen is removed by a washing step and the antibody bound biotinylated antigen is determined by use of streptavidine alkaline phosphatase as marker and p-nitrophenyl phosphate as substrate.

MELATONIN PLASMA, SERUM



Enzyme Immunoassay for the quantitative determination of melatonin in serum and plasma.



Extraction with C18 RP columns. 12 x 8 single break-apart well ELISA plate. 6 standards, 2 controls.



Extraction 18 min; ELISA 16 hours 40 min.



0.5 ml serum or plasma.



Enzyme Immunoassay for the quantitative and direct determination of melatonin in saliva.



No sample preparation. 6 standards, 2 controls, ready for use.



ELISA 19 hours 15 min.



100 µl saliva.

KIT DETAILS – TECHNICAL DATA

CAT NO.	PARAMETER	SAMPLE SIZE	STANDARDS	SENSITIVITY	FORMAT
BA E-3300	Melatonin	500 µl serum, plasma	0/3 - 300 pg/ml	1.6 pg/ml	96 wells
BA E-3400	Melatonin Direct Saliva	100 µl saliva	0/0.5 – 50 pg/ml	0.3 pg/ml	96 wells