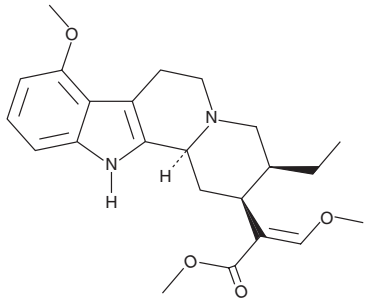
PRODUCT INFORMATION

Mitragynine

Item No. 11151

CAS Registry No.: 4098-40-2
Formal Name: (αE,2S,3S,12bS)-3-ethyl-1,2,3,4,6,7,12,12b-octahydro-8-methoxy-α-(methoxymethylene)-indolo[2,3-a] quinolizine-2-acetic acid, methyl ester
Synonym: 9-methoxy Corynantheidine
MF: $C_{23}H_{30}N_2O_4$
FW: 398.5
Purity: ≥98%
Supplied as: A neat solid
Storage: -20°C
Stability: ≥3 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

Mitragynine is an indole alkaloid from the plant *M. speciosa*. It has stimulatory, antinociceptive, and opiate-like effects, acting through noradrenergic, serotonergic, and opioid receptors.[1,2] Mitragynine has a higher affinity for the μ-opioid receptor than the δ- or κ-opioid receptors (pK_i = 8.14, 7.22, and 5.96, respectively).[2] Mitragynine and its derivatives have been identified in products sold as incense.[3] The identification and quantification of mitragynine and related alkaloids, as well as their phase I and II metabolites, have been described.[4-6] This product is intended for forensic applications.

This product is qualified as a Reference Material that has been manufactured and tested to ISO/IEC 17025 and ISO 17034 international standards.

References

1. Matsumoto, K., Mizowaki, M., Suchitra, T., *et al*. Central antinociceptive effects of mitragynine in mice: Contribution of descending noradrenergic and serotonergic systems. *Eur. J. Pharmacol*. **317(1)**, 75-81 (1996).
2. Takayama, H., Ishikawa, H., Kurihara, M., *et al*. Studies on the synthesis and opioid agonistic activities of mitragynine-related indole alkaloids: Discovery of opioid agonists structurally different from other opioid ligands. *J. Med. Chem*. **45(9)**, 1949-1956 (2002).
3. Kikura-Hanajiri, R., Uchiyama, N., and Goda, Y. Survey of current trends in the abuse of psychotropic substances and plants in Japan. *Leg. Med. (Tokyo)* **13(3)**, 109-115 (2011).
4. Lu, S., Tran, B.N., Nelsen, J.L., *et al*. Quantitative analysis of mitragynine in human urine by high performance liquid chromatography-tandem mass spectrometry. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci*. **877(24)**, 2499-2505 (2009).
5. Philipp, A.A., Wissenbach, D.K., Weber, A.A., *et al*. Metabolism studies of the Kratom alkaloids mitraciliatine and isopaynantheine, diastereomers of the main alkaloids mitragynine and paynantheine, in rat and human urine using liquid chromatography- linear ion trap- mass spectrometry. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci*. **879**(15-16), 1049-1055 (2011).
6. Chittrakarn, S., Penjamras, P., and Keawpradub, N. Quantitative analysis of mitragynine, codeine, caffeine, chlorpheniramine and phenylephrine in a kratom (*Mitragyna speciosa* Korth.) cocktail using high-performance liquid chromatography. *Forensic Sci. Int*. **[In press]** (2011).

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