Stiripentol
Item No. 17781

CAS Registry No.: 49763-96-4
Formal Name: 1-(1,3-benzodioxol-5-yl)-4,4-dimethyl-1-penten-3-ol
Synonym: BCX 2600
MF: C_{14}H_{18}O_{3}
FW: 234.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: \lambda_{\text{max}}: 263, 306 nm

Laboratory Procedures
For long term storage, we suggest that stiripentol be stored as supplied at -20°C. It should be stable for at least two years.

Stiripentol is supplied as a crystalline solid. A stock solution may be made by dissolving the stiripentol in the solvent of choice. Stiripentol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of stiripentol in ethanol is approximately 30 mg/ml and approximately 50 mg/ml in DMSO and DMF.

Stiripentol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, stiripentol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Stiripentol has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Stiripentol is a third-generation anti-epileptic drug that is known to inhibit the synaptosomal uptake of GABA, increasing the activation of GABA\textsubscript{A} receptors.\textsuperscript{1,2} It also inhibits microsomal cytochrome P450 (CYP) isoforms CYP3A4, CYP1A2, and CYP2C19.\textsuperscript{1} More recently, stiripentol and analogs have been shown to inhibit lactate dehydrogenase (LDH), blocking both lactate to pyruvate and pyruvate to lactate conversions by human LDH isoforms 1 and 5 at 500 µM.\textsuperscript{3} In this way, stiripentol mimics ketogenic diets, which can also lower lactate levels in the brain and prevent seizures.\textsuperscript{3}

References
2. Fisher, J.L. The effects of stiripentol on GABA\textsubscript{A} receptors. Epilepsia 52(0 2), 76-78 (2011).

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/17781