Certificate of Analysis

Product Name: **Levcromakalim** **Catalog No.: 1378** **Batch No.: 1**

CAS Number: 94535-50-9

IUPAC Name: (3*S*,4*R*)-3,4-dihydro-3-hydroxy-2,2-dimethyl-4-(2-oxo-1-pyrrolidinyl)-2*H*-1-benzopyran-6-carbonitrile

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{18}N_2O_3.¼H_2O$

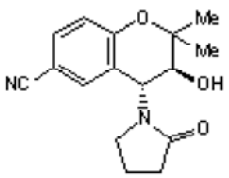
Batch Molecular Weight: 290.83

Physical Appearance: White solid

Solubility: DMSO to 10 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.5 (Dichloromethane:Methanol:Ammonia soln. [9:1:0.1])

Melting Point: At 247°C

HPLC: Shows 99.9% purity

Chiral HPLC: Shows 99.8% purity

^{1}H NMR: Consistent with structure

Optical Rotation: $[\alpha]_D$ = -66 (Concentration = 1, Solvent = Chloroform)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.08	6.41	9.63
Found	65.75	6.65	9.41

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Description:

Levcromakalim is an active enantiomer of the prototypical $K_{ir}6$ (K_{ATP}) channel opener Cromakalim. Hypotensive and airways relaxant. IC_{50} = 490 nM in guinea pig trachea.

Physical and Chemical Properties:

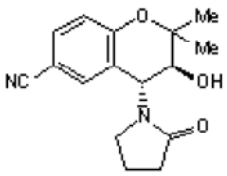
Batch Molecular Formula: $C_{16}H_{18}N_2O_3.¼H_2O$

Batch Molecular Weight: 290.83

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 10 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Licensing Information:

Sold under license

References:

Noack *et al* (1992) Potassium channel modulation in rat portal vein by ATP depletion: a comparison with the effects of levcromakalim (BRL 38227). Br.J.Pharmacol. ***107*** 945. PMID: 1467843.

Taylor *et al* (1992) The inhibitory effects of cromakalim and its active enantiomer BRL 38227 against various agonists in guinea pig and human airways. J.Pharmacol.Exp.Ther. ***261*** 429. PMID: 1578358.

Buckle *et al* (1991) Synthesis and smooth muscle relaxant activity of a new series of potassium channel activators: 3-amido-1,1-dimethylindan-2-ols. J.Med.Chem. ***34*** 919. PMID: 2002472.