

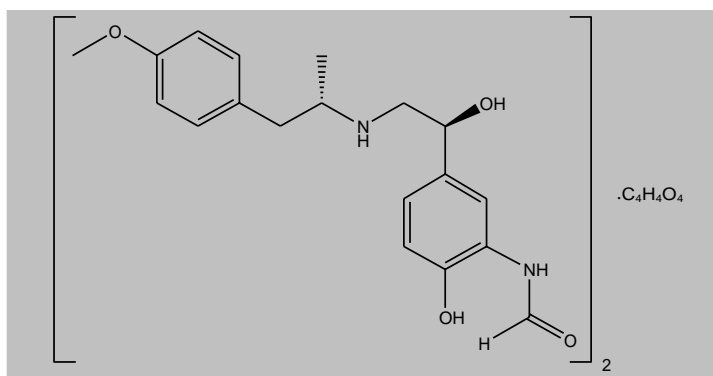
## Certificate Of Analysis Quality Control Testing and Research Application

COA Preparation Date: 12/03/2014  
COA Revision Date: 12/03/2017

**Product:** Formoterol fumarate  
**Cat. No.:** NB-48-0415-10MG  
**Batch No.:** 0369BG/03  
**Chemical Name:** (*R\*,R\**)-N-[2-Hydroxy-5-[1-hydroxy-2-[[2-(4-methoxyphenyl)-1-methylethyl]amino]ethyl]phenyl]formamide fumarate (2:1) salt

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $(C_{19}H_{24}N_2O_4)_2 \cdot C_4H_4O_4$   
**Batch Molecular Weight:** 804.89  
**CAS No.:** [183814-30-4]  
**Physical Appearance:** White to light yellow solid  
**Melting Point:**  
**Solubility:** Soluble to 5 mM in water or to 50 mM in DMSO  
**Storage:** RT  
**Batch Molecular Structure:**



**Product Description:** A long-acting selective  $\beta_2$ -adrenergic receptor agonist ( $K_D$  values are 7.6 nM for  $\beta_2$ - and 2.6  $\mu$ M for  $\beta_1$ -receptors). Potently relaxes guinea-pig trachea with a  $pD_2$  value of 9.29.

**References:** 1. Decker et al. (1982) J Pharm Pharmacol 34:107; 2. Anderson (1993) Life Sci 52:2145; 3. Naline et al. (1994) Eur Respir J 7:914

- CAUTION - Not fully tested. For Research use only. Not for human use. -

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**BG0369 Formoterol fumarate****2. ANALYTICAL DATA**

HPLC: corresponds to the reference

MS: corresponds to the reference

Tests: pH: 5.8 (complies); HPLC Assay: &gt; 99% (complies). Complies with EP5.5 standards.

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