

# CERTIFICATE of ANALYSIS



## Verapamil (hydrochloride)

$\alpha$ -[3-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]propyl]-3,4-dimethoxy- $\alpha$ -(1-methylethyl)-benzeneacetonitrile, monohydrochloride

Item No. 14288 \* Batch No. 0673399

Purity Specification:  $\geq 98\%$

Molecular formula:  $C_{27}H_{38}N_2O_4 \cdot HCl$

CAS number: 152-11-4

Formula weight: 491.10

Expiration date: 25MAR2029

### Overview

#### Tests

#### Results

|           |                                                      |
|-----------|------------------------------------------------------|
| HPLC      | Purity: 99.5 %                                       |
| Mass Spec | M-HCl: 455.3                                         |
| TLC       | Purity: 100 %                                        |
| UV        | $\lambda$ max: 231.00 nm<br>$\lambda$ max: 279.00 nm |
| NMR       | Conforms                                             |

Reviewed and approved by: Libby Perry

#### WARNING

THIS PRODUCT IS FOR RESEARCH USE - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE. IT IS THE RESPONSIBILITY OF THE PURCHASER TO DETERMINE SUITABILITY FOR OTHER APPLICATIONS.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM