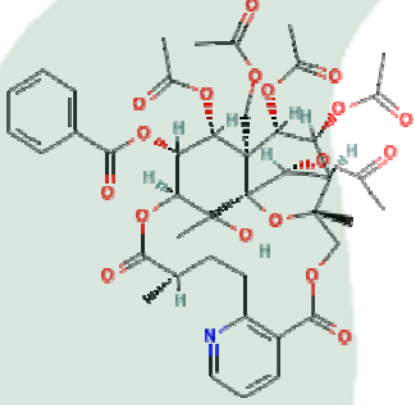


| | | |
|-----------------------|---------------------------------------|--|
| PRODUCT ID | E-0716 | <p style="text-align: center;">Structure</p>  |
| PRODUCT | Wilforine/雷公藤次碱 | |
| STANDARD TYPE | Quantitative Reference Standard/ 含量测定 | |
| LOT NUMBER | 15051422 | |
| ASSAY METHOD | HPLC,MS,NMR | |
| DATE OF SAMPLE | 2015-05-14 | |
| DATE OF REPORT | 2015-05-14 | |

CHEMICAL NAME

8,11-Epoxy-9,12-ethano-11,15-methano-5H,11H-[1,9]dioxacyclooctadecino[4,3-b]pyridine-5,17(18H)-dione,10,13,22,23-tetrakis(acetyloxy)-12-[(acetyloxy)methyl]-14-(benzyloxy)-7,8,9,10,12,13,14,15,19,20-decahydro-21-hydroxy-8,18,21-trimethyl-,[8R-(8R*,9R*,10R*,11S*,12S*,13R*,14R*,15S*,18S*,21S*,22S*,23R*)]-

OTHER NAME
CHEMICAL FORMULA

C₄₃H₄₉N₁O₁₈

MOLECULAR WEIGHT(MW)

867.84506

CAS NUMBER

11088-09-8

CHEMICAL FAMILY

Alkaloids生物碱

FROM

卫矛科植物雷公藤Tripterygium wilfordii Hook. f.

ANALYTICAL RESULT

| TEST | METHOD | SPECIFICATION | RESULT |
|------------------|----------------|---------------|----------|
| HPLC | Q/TFFK165—2007 | NLT ≥97.0% | Conforms |
| NMR | | Conforms | Conforms |
| MS | | Conforms | Conforms |
| Residual Solvent | Q/TFFK165—2007 | NA | ND |
| Water | Q/TFFK165—2007 | ≤2% | Conforms |
| Appearance | | White Crystal | Conforms |

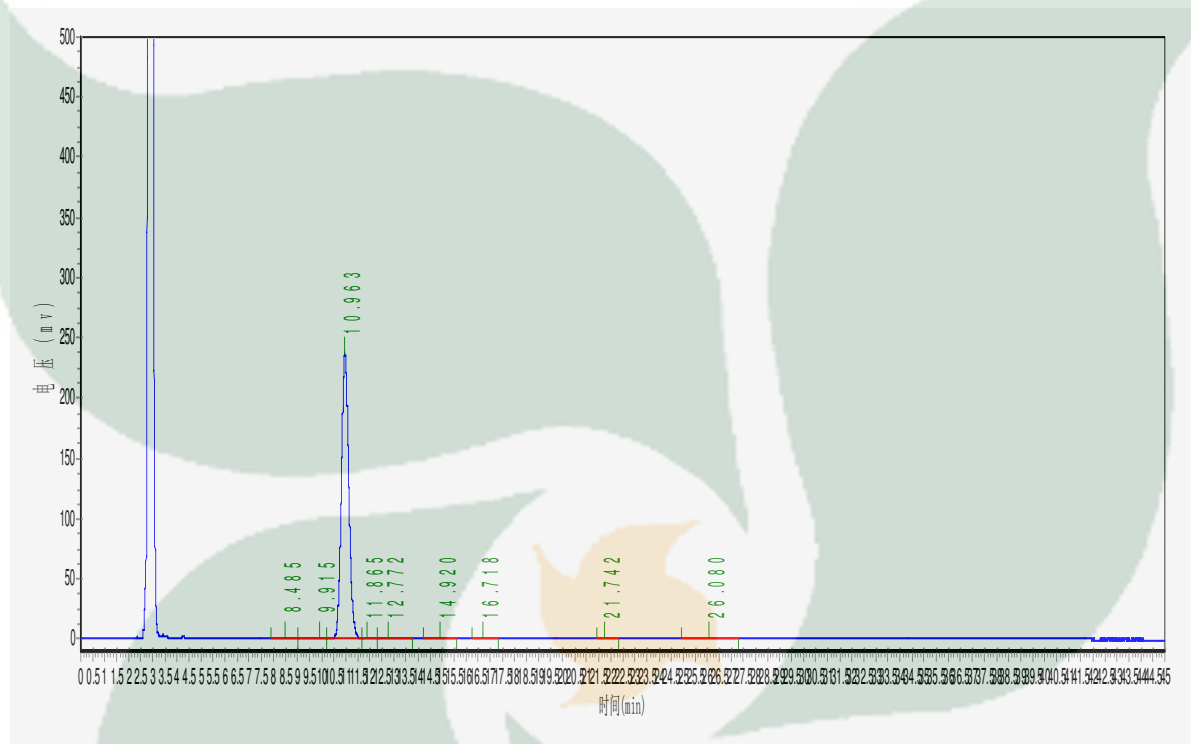
STORAGE CONDITIONS

STORAGE

Refer to the label

Product Analysis Report

Product Name: Wilforine **Chrom-Column:** C18
Lot Number: 15051422 **Mobile Phase:** MeOH:H2O=70:30
Temperature: 25°C **Wavelength:** 230nm
Detect Time: 2015-05-14 **Inject Vol:** 20ul
Analyst: shuzhilin **Flow:** 1.0ml/min



| No. | Ret.Time min | Height mAU | Area mAU*min | Rel.Area % |
|-----|-----------------|---------------|-----------------|---------------|
| 1 | 8.485 | 553.309 | 11840.330 | 0.2265 |
| 2 | 9.915 | 709.458 | 16455.197 | 0.3147 |
| 3 | 10.963 | 237809.766 | 5116859.000 | 97.8680 |
| 4 | 11.865 | 1065.756 | 24214.334 | 0.4631 |
| 5 | 12.772 | 566.753 | 23949.744 | 0.4581 |
| 6 | 14.920 | 325.017 | 8591.663 | 0.1643 |
| 7 | 16.718 | 215.448 | 4476.951 | 0.0856 |
| 8 | 21.742 | 94.733 | 2211.801 | 0.0423 |
| 9 | 26.080 | 515.092 | 19727.900 | 0.3773 |