MethodsNow™

合成/分析方法合集

//CODiE//
2017 SIIA CODiE WINNER

METHODSNOW™
A CAS SOLUTION

www.cas.org/MethodsNow
www.MethodsNow.com

MethodsNow™简介

MethodsNow是美国化学文摘社（CAS）最新发布的全球最大的合成及分析方法应用，收录高质量标引、增值的分析方法和合成方法，聚焦于：

- 活性药物成分及代谢物分析
- 阴阳离子
- 有机化合物分析
- 土壤分析
- 塑料加工
- 环境分析
- 石油产品分析
- 炸药分析
- 无机化合物
- 合成方法
- 毒素分析
- 生物鉴定
- 农药残留检测
- 生物合成探针
- 同位素分析
- 大气分析
- 食品分析
- 除草剂分析
- 生物分子分离
- 毒品分析
- 天然产物分离/分析
- 蛋白质分析
- 痕量元素分析
- 手性化合物拆分
- 脂肪酸分析
- 化妆品分析
- 有机金属化合物
- 法医分析

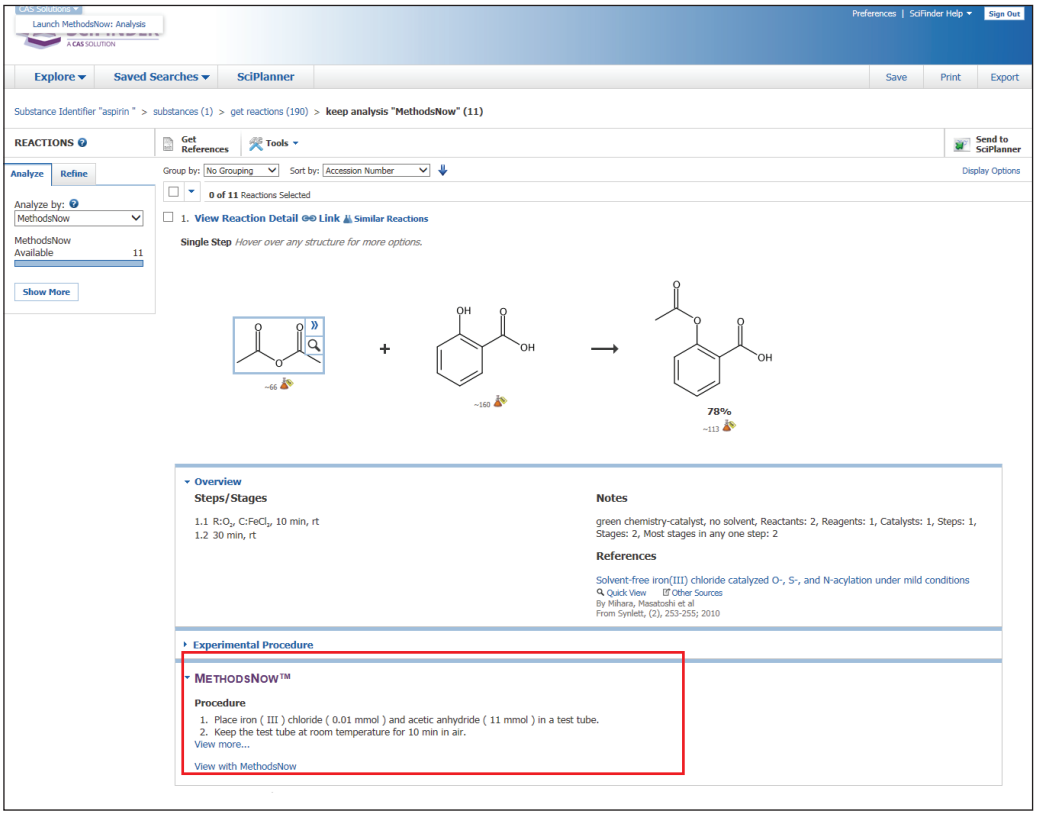
★共有近50种方法分类，随着更多科学信息被收录，分类量还将持续增加

通过MethodsNow：

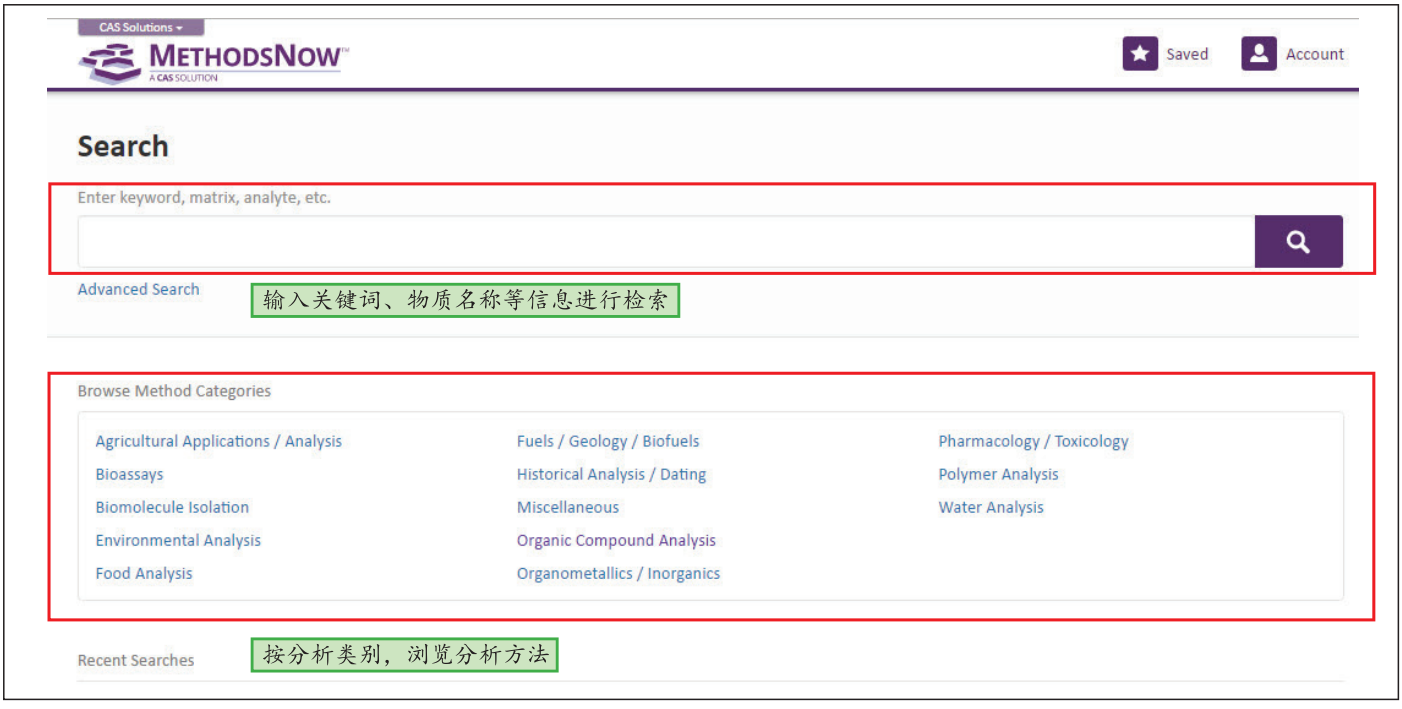
- 轻松获取来自数千种顶级期刊及专利中披露的分析方法和合成方法
- 轻松获取合成方法详情，包括底物、催化剂、溶剂、产物、操作步骤（多步反应的每步操作步骤）、产物谱图数据、产物性状、实验量级
- 轻松获取实验方法详情，包括实验用原料、操作步骤、实验条件、仪器等详细信息
- 快速对比多种分析方法，轻松定位可实施的实验方法
- 无需花费额外费用获取原文，即可轻松获取实验所需的所有信息
- 经过科学家的标引、筛选，可为您节省阅读和理解文献所需时间
- 新的CAS Method Number™有助于快速定位相关文献

界面友好，操作简单（一个产品，两个界面）

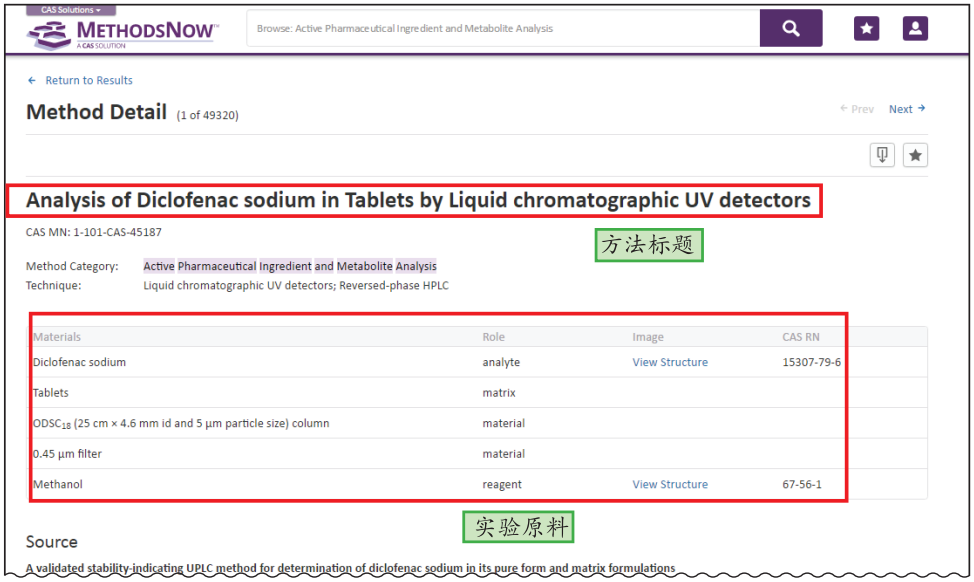
通过SciFinder获取MethodsNow合成方法



通过www.MethodsNow.com获取MethodsNow分析方法



分析方法详情示例


CAS Solutions
METHODSNOW
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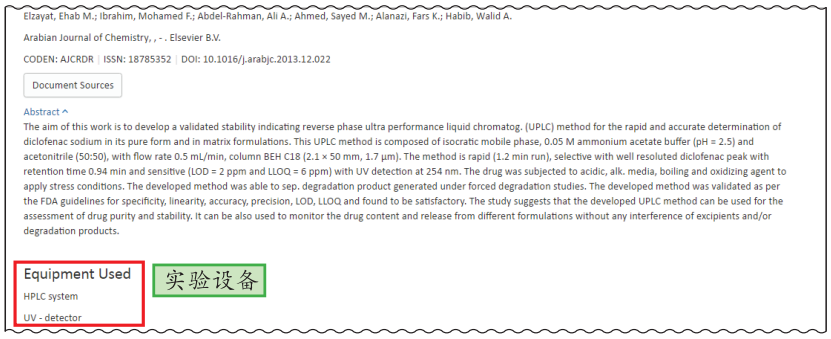
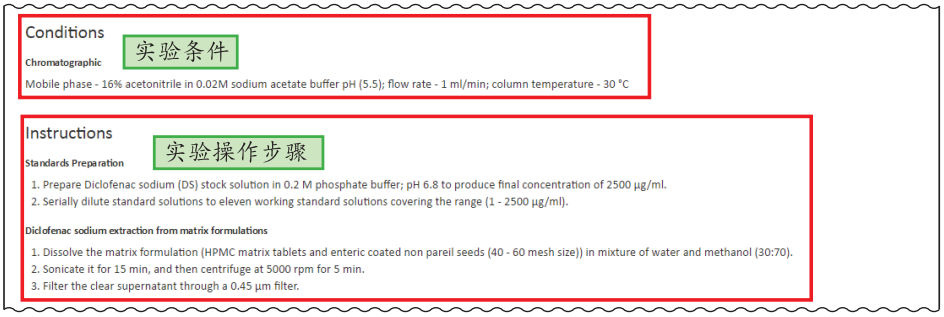
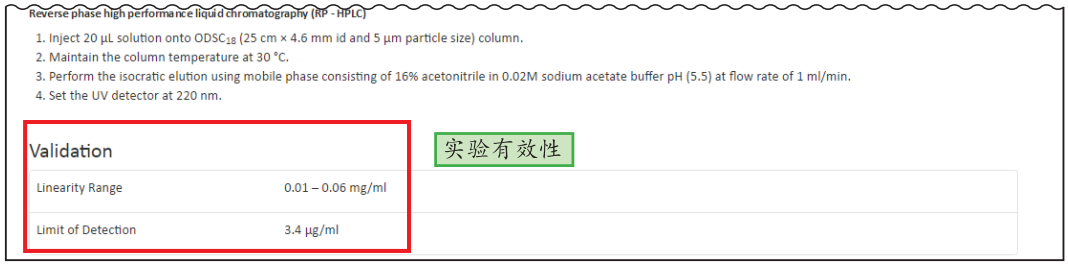
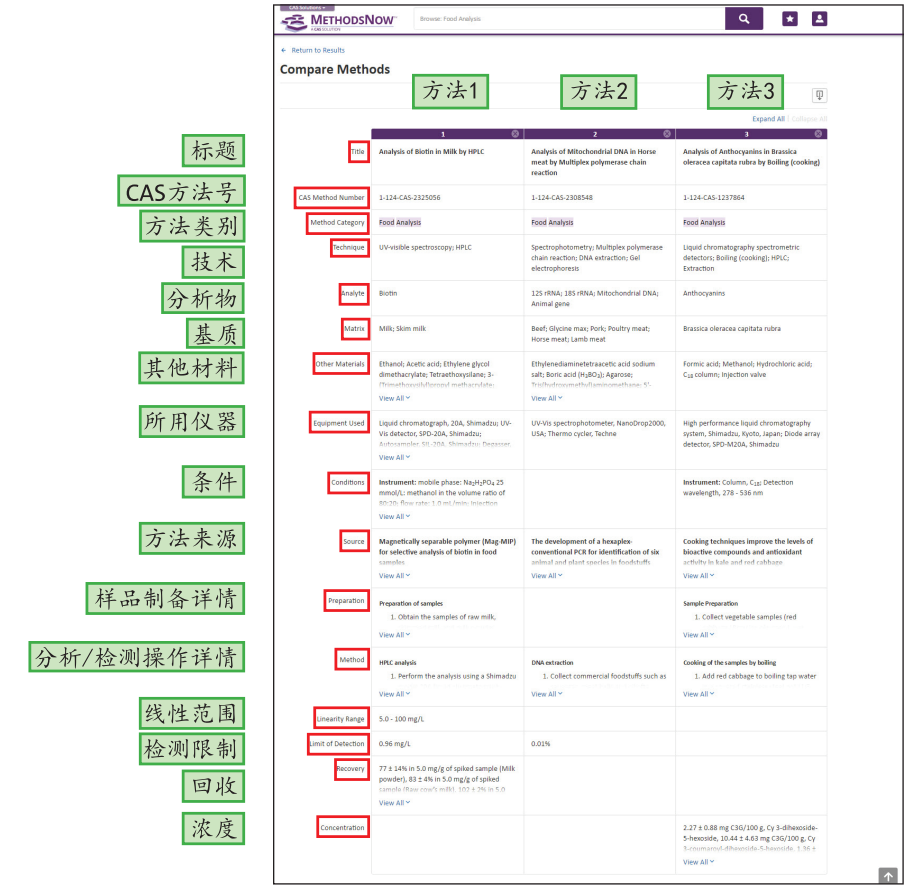
Browse: Active Pharmaceutical Ingredient and Metabolite Analysis
Return to Results
Method Detail (1 of 49320)
Prev
Next
Analysis of Diclofenac sodium in Tablets by Liquid chromatographic UV detectors
CAS MN: 1-101-CAS-45187
方法标题
Method Category: Active Pharmaceutical Ingredient and Metabolite Analysis
Technique: Liquid chromatographic UV detectors; Reversed-phase HPLC
Materials
Role
Image
CAS RN
Diclofenac sodium
analyte
View Structure
15307-79-6
Tablets
matrix
ODSC18 (25 cm × 4.6 mm id and 5 µm particle size) column
material
0.45 µm filter
material
Methanol
reagent
View Structure
67-56-1
实验原料
Source
A validated stability-indicating UPLC method for determination of diclofenac sodium in its pure form and matrix formulations


Elzayat, Ehab M.; Ibrahim, Mohamed F.; Abdel-Rahman, Ali A.; Ahmed, Sayed M.; Alanazi, Fars K.; Habib, Walid A.
Arabian Journal of Chemistry, , - . Elsevier B.V.
CODEN: AJCRDR | ISSN: 18785352 | DOI: 10.1016/j.arabjc.2013.12.022
Document Sources
Abstract
The aim of this work is to develop a validated stability indicating reverse phase ultra performance liquid chromatog. (UPLC) method for the rapid and accurate determination of diclofenac sodium in its pure form and in matrix formulations. This UPLC method is composed of isocratic mobile phase, 0.05 M ammonium acetate buffer (pH = 2.5) and acetonitrile (50:50), with flow rate 0.5 mL/min, column BEH C18 (2.1 × 50 mm, 1.7 µm). The method is rapid (1.2 min run), selective with well resoluted diclofenac peak with retention time 0.94 min and sensitive (LOD = 2 ppm and LLOQ = 6 ppm) with UV detection at 254 nm. The drug was subjected to acidic, alk. media, boiling and oxidizing agent to apply stress conditions. The developed method was able to sep. degradation product generated under forced degradation studies. The developed method was validated as per the FDA guidelines for specificity, linearity, accuracy, precision, LOD, LLOQ and found to be satisfactory. The study suggests that the developed UPLC method can be used for the assessment of drug purity and stability. It can be also used to monitor the drug content and release from different formulations without any interference of excipients and/or degradation products.
Equipment Used
HPLC system
UV - detector
实验设备

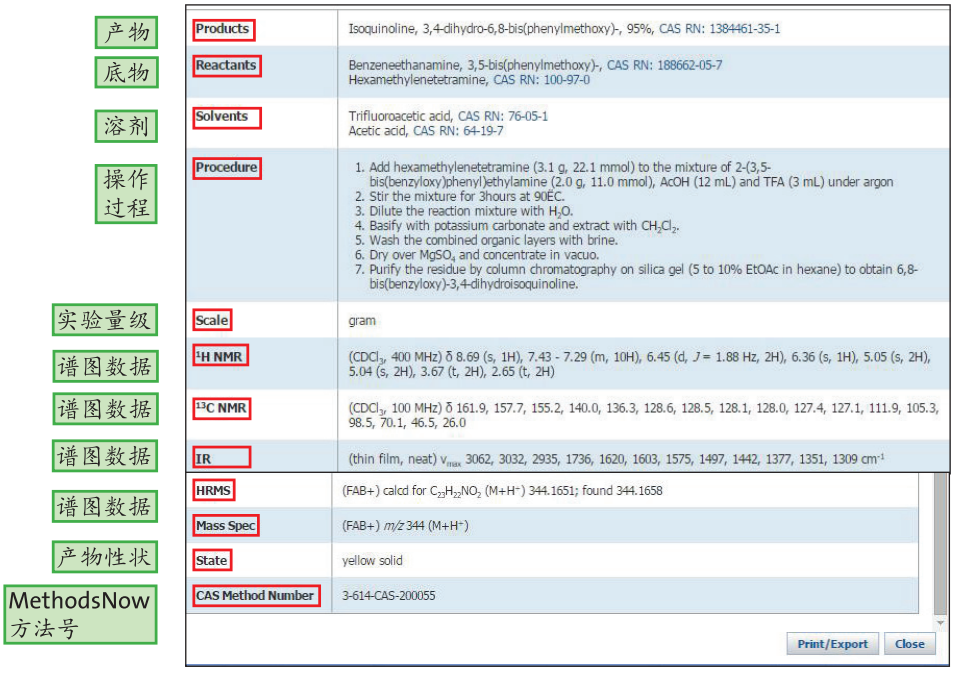

Conditions
Chromatographic
实验条件
Mobile phase - 16% acetonitrile in 0.02M sodium acetate buffer pH (5.5); flow rate - 1 ml/min; column temperature - 30 °C
Instructions
Standards Preparation
实验操作步骤
1. Prepare Diclofenac sodium (DS) stock solution in 0.2 M phosphate buffer; pH 6.8 to produce final concentration of 2500 µg/ml.
2. Serially dilute standard solutions to eleven working standard solutions covering the range (1 - 2500 µg/ml).
Diclofenac sodium extraction from matrix formulations
1. Dissolve the matrix formulation (HPMC matrix tablets and enteric coated non pareil seeds (40 - 60 mesh size)) in mixture of water and methanol (30:70).
2. Sonicate it for 15 min, and then centrifuge at 5000 rpm for 5 min.
3. Filter the clear supernatant through a 0.45 µm filter.


Reverse phase high performance liquid chromatography (RP - HPLC)
1. Inject 20 µL solution onto ODSC18 (25 cm × 4.6 mm id and 5 µm particle size) column.
2. Maintain the column temperature at 30 °C.
3. Perform the isocratic elution using mobile phase consisting of 16% acetonitrile in 0.02M sodium acetate buffer pH (5.5) at flow rate of 1 ml/min.
4. Set the UV detector at 220 nm.
Validation
实验有效性
Linearity Range
0.01 – 0.06 mg/ml
Limit of Detection
3.4 µg/ml

快速对比多种方法，轻松定位可实施的实验方法



合成方法详情示例



美国化学文摘社（Chemical Abstracts Service，简称“CAS”）是美国化学会（American Chemical Society，简称“ACS”）旗下的分支机构，是全球提供化学及相关信息解决方案的权威机构。秉承美国化学会“通过化学的力量改善人们的生活”的愿景，美国化学文摘社专业的科学家团队致力于发现、收集及管理所有公开的化学及相关信息，创建了世界上对于创新至关重要的、最有价值的内容集合。全球的科研人员及从事专利的专业人士依靠美国化学文摘社提供的研究解决方案实现其科研发现并完成工作流程。

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