

## Comprehensive Analysis / Detection

- An advanced analytical platform, state-of-the-art instrumentation, and an experienced synthetic/analytical team.
- Supports a battery of testing including Karl Fischer, LOD, ROI, IR, UV, GC, TGA, NMR, etc.
- Provides comprehensive analysis and testing reports, with support for metrological traceability.



Nuclear Magnetic Resonance Spectrometer



## Rigorous Quality System

- Certified ISO 9001 | ISO/IEC 17025 and GMP
- A strong R&D/analytical team, established SOP processes, and dedicated pre-sales and after-sales services to guarantee the quality of both our products and services.



## Customized Reference Standard Products

- MCE delivers comprehensive, one-stop services encompassing the synthesis, and analysis of reference standards.
- Our rigorous quality management system, along with strong pre- and post-sales support, ensures the excellence of our products and services.
- We offer tailored solutions for reference standards, method validation, and analytical method development.

### Standard Product Customization Service Process



# Reference Standards

High Purity | ISO17025 | Traceability | Comprehensive Analysis

### MedChemExpress USA

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For research use only.  
We do not sell to patients.

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Master of  
Bioactive Molecules

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## Our Advantages

- Structural Identification
- Content Determination
- Analytical Method Validation
- ISO17025
- ISO9001

Reference standards are critical in ensuring the accuracy and reliability of analytical results for the tested products. Their applications include instrument calibration, analytical method validation, structural identification, and quantitative analysis. Medchemexpress (MCE) offers a wide range of reference standards, each of which is qualified following ISO17025 guidelines. Moreover, comprehensive analytical testing and documentation for each reference standard will be provided for its structure identity and purity.

MCE's diversified reference standard compounds include but not limited to bioactive small molecules, natural products, lipids, and isotope products. These standards can be used for pharmaceutical analysis, target screening, structural identification, content determination, environmental monitoring, and food safety, etc.

### Diversified Products

- Covers a variety of research areas
- Meet different research needs

### Synthesis and Qualification of Reference Standards

- Experienced synthetic and analytical teams
- Tailored customization services

### Support for Metrological Traceability

- Metrological traceability for each batch of products
- Reference standards for bioactive molecules, lipids, and natural products, following SO17025 guidelines

### Extensive Analysis

- Stringent quality control standards
- Provide analytical reports with extensive testing items including LC-MS, HNMR, HPLC, Water content (KF), Residual Solvents (GC), ROI, TGA, etc.

## Bioactive Small Molecule Standards

Bioactive small molecule analytical reference standard products can be used in drug metabolism and chemical biology studies. Tooled with reference standards in qualitative analysis and rapid screening, the structure and content and analytes can be determined, thereby facilitating relevant target identification and biological pathway studies.

Product Name	Cat. No.	Description
Aspirin (Standard)	HY-14654R	The analytical standard of Aspirin, which is an orally active inhibitor of COX-1/COX-2.
Amiloride hydrochloride (Standard)	HY-B0285AR	The analytical standard of Amiloride hydrochloride. Amiloride hydrochloride is an inhibitor of epithelial sodium channel (ENaC) and urokinase-type plasminogen activator receptor (uTPA).
Ezetimibe (Standard)	HY-17376R	The analytical standard of Ezetimibe (SCH 58235). Ezetimibe is a potent cholesterol absorption inhibitor.
Probenecid (Standard)	HY-B0545R	The analytical standard of Probenecid. Probenecid is a potent and selective agonist of transient receptor potential vanilloid 2 (TRPV2) channels.
Exemestane (Standard)	HY-13632R	The analytical standard of Exemestane (FCE 24304). Exemestane is a selective, irreversible and orally active steroidal aromatase inhibitor.

## Lipid Standards

Lipids, rich in living organisms, are insoluble in water while being soluble in organic solvents. Lipid metabolism is crucial in the pathogenesis of numerous diseases, particularly metabolic dysfunctions associated with conditions such as cancer, diabetes, chronic kidney diseases, neurodegenerative disorders, and liver ailments. MCE offers a variety of lipid analytical reference standards that can be used for rapid screening in lipid metabolism research for the clients.

Product Name	Cat. No.	Description
Fulvestrant (Standard)	HY-13636R	The analytical standard of Fulvestrant. Fulvestrant (ICI 182780) is a pure antiestrogen and a potent estrogen receptor (ER) antagonist.
Progesterone (Standard)	HY-N0437R	The analytical standard of Progesterone. Progesterone is a steroid hormone that regulates the menstrual cycle and is crucial for pregnancy.
Estradiol (Standard)	HY-B0141R	The analytical standard of Estradiol (β-Estradiol). Estradiol is a steroid hormone and the major female sex hormone.
Salsalate (Standard)	HY-B1245R	The analytical standard of Salsalate. Salsalate, a non-acetylated salicylate, is an effective antirheumatic agent that bypasses gastric absorption and avoids cyclooxygenase inhibition.

## Natural Products Standards

Natural products are one of the important sources for medicine, food, health-care nutrients, and cosmetics. MCE offers a diverse range of natural product reference standards for composition identification and content determination in natural products.

Product Name	Cat. No.	Description
Luteolin (Standard)	HY-N0162R	The analytical standard of Luteolin (Luteoline). Luteolin, a flavanoid compound, is a potent Nrf2 inhibitor.
Resveratrol (Standard)	HY-16561R	The analytical standard of Resveratrol. Resveratrol, a natural polyphenolic phytoalexin, possesses anti-oxidant, cardioprotective, and anti-cancer properties.
Daidzein (Standard)	HY-N0019R	The analytical standard of Daidzein. Daidzein acts as a PPAR activator.
Fisetin (Standard)	HY-N0182R	The analytical standard of Fisetin. Fisetin is a natural flavonol found in many fruits and vegetables with various benefits, such as antioxidant, anticancer, neuroprotection effects.
Vanillin (Standard)	HY-N0098R	The analytical standard of Vanillin (p-Vanillin). Vanillin is a single molecule extracted from vanilla beans and also a popular odor used widely in perfume, food and medicine.

## Isotope Internal Standard

Isotopes are essential tools in tracing and labeling in biochemical studies. The inclusion of specific stable isotopes in their molecular structure enables to offer accurate and reliable standardization methods. Widely used as internal standards isotopes is important in various research domains such as clinical medicine, biomedical sciences, environmental science, and food testing.

Product Name	Cat. No.	Description
Dxd-d <sub>5</sub>	HY-13631DS	A deuterium labeled Dxd. Dxd is a potent DNA topoisomerase I inhibitor.
MMAE-d <sub>6</sub>	HY-15162A	A deuterated labeled MMAE, a potent mitotic inhibitor and a tubulin inhibitor.
Exatecan-d <sub>5</sub> mesylate	HY-13631AS	A deuterium labeled Exatecan mesylate. Exatecan mesylate is a DNA topoisomerase I inhibitor.
Sorafenib-d <sub>3</sub>	HY-10201S	A deuterated Sorafenib. Sorafenib is the first deuterium-generation tumor suppressor.
VD3-d <sub>6</sub>	HY-15331	A deuterium labeled Vitamin D <sub>3</sub> (VD3). VD3 is a naturally occurring form of VD3.