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Reference Materials & Standards



New Materials



Company Profile

CATO Research Chemicals Inc. is an industry leader specializing in the R&D, testing, assignment, and sales of reference materials and standards. Located in the Huangpu District of Guangzhou, CATO covers an area of 6000 m² and employs more than 170 individuals, with technicians accounting for 72% of its workforce.

Relying on the advanced synthesis and analysis ability of small molecular compounds and the only RMP accredited with ISO17034 by dual system worldwide. CATO provides global customers with top-quality products, and has been successively rated as National High-tech Enterprise, National Five-star Brand, National Advanced Sci & Tech Innovation Unit, Member of the National Standards Technical Comittee, Guangdong Specialized and Innovative Enterprie, Guangdong RM Engineering Technology Research Center, Environmental RM R&D Joint Innovation Base, Guangdong Province Enterprise of Observing Contract and Valuing Credit.









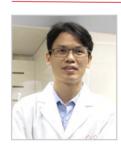
Chen Zhidong - Chairman of the Board

An expert of the National Standards Committee, with 6 years'background in chemical analysis technology, 10 years' experience in corporate management, and has worked for the world's top third-party testing organizations.



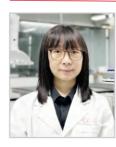
Feng Weizhao - General Manager

A member of the National Technical Committee for Standardized Products, has 15 years of experience working in international third-party testing laboratories, has obtained various qualifications for internal auditing of ISO systems, and has participated in the drafting of several national standards.



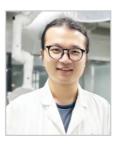
Liang Dacheng - Technical Director

Engaged in pharmaceutical research for 13 years. He was responsible for the process development of the world's first marketed Bruton's tyrosine kinase inhibitor ibrutinib, developed the industry's leading hexavalent sulphur-fluorine exchange catalytic system, and has published a number of papers.



Li Yaping - Senior Analytical Lab Manager

Master of Traditional Chinese Medicine from Hubei University of Traditional Chinese Medicine. He was the project leader of Pharmaceutical Analysis Department. He has 10+ years of drug research and development experience. Familiar with testing method development, quality research, and calibration of drugs and standards.



Huang houji - Deputy Analytical Lab Manager

Master of Medicinal Chemistry from Newcastle University, 5 years of experience in analytical laboratories, familiar with the national ISO17034 system. Lead the method development and verification of multiple analysis projects. Proficient in the application and maintenance of various types of laboratory instruments (NMR, LC, MS, etc.).

CATO Research Chemicals Inc.

Technical Capacity







The Doctoral synthetic team



Synthetic Ability



Deuterium substitution technology for small molecule compounds



Research experience in synthesis of 100000 + small molecule compounds



Hexavalent sulphur-fluorine exchange catalytic system

Good at chiral and heterocyclic compounds synthesis









Mainly Analytical Equipment

NMR	LCMSMS	LCMS
HPLC	GC	GCMS
IR	TGA	Precision Balances (0.001 mg)
Karl Fischer Titrators	PTLC	•••••



Analytical Capability



PhD analysis team



The investment in equipment & facilities exceeds 30 million



Unknown substance exploration





Own Business



CATO Brand Products



Match the requirements of Pharmacopoeia and regulations



45300+ Pharmaceuticals

Consumer Goods



15000+ Isotope-labeled Materials



2200+ Food



9300+



3900+ Veterinary



1500+ Environment

7600+



2500+ Quality Control Material



2400+ Nature Extraction



3000+ New Materials



Custom Composite Service



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Pharmaceutical Impurities And Primary Reference Materials

The precision and reliability of drug testing and analysis largely rely on the stable supply and reasonable application of reference materials. With their high purity and well-defined characteristics, these reference materials serve as indispensable benchmarks throughout the drug testing process, ensuring the effectiveness and accuracy of analytical methods. In establishing standardized systems, reference materials ensure a high degree of consistency and repeatability across different laboratories, thereby promoting precise identification, accurate quantification, and strict quality control of drugs.

- ✓ Sensory organs
- ✓ Respiratory system
- ✓ Musculoskeletal system
- ✓ Anti-infectives
- ✓ Antiparasitics
- ✓ Anti-tumour & Immunology
- ✓ Genitourinary System & Sex Hormones
- ✓ Dermatological
- ✓ Nervous System
- **✓** Body Hormones
- ✓ Digestive System & Metabolic System
- ✓ Cardiovascular System
- ✓ Blood & Haematopoietic Organs
- ✓ Others





13 Isotope-labeled Materials

Isotope internal Material is an important analytical chemistry technique in which isotope internal standards are used as reference substances for mass measurements in quantitative analyses, with applications including, but not limited to, medical research, environmental science, and food safety. At the same time, isotope internal standard can be used to track the operation and change law of substances. The Centre for Isotope Standard Development has mastered the technology of selective decarboxylation and deuteration and aromatic ring deuteration, and has developed isotopes with an abundance of 98%+, a single production capacity of more than grams, and the core raw materials are domestically produced.

- ✓ Drug Analysis and Pharmacokinetics
- ✓ Clinical Mass Spectrometry
- **✓** Environmental Testing
- ✓ Food Testing
- ✓ Pesticide Residue Testing
- ✓ Veterinary
- ✓ Others





Pesticide Residue Reference Materials

The use of pesticides comes with issues of residues. These residues may enter the air, soil, water, and food chain through various pathways, posing potential threats to the environment and human health. To address this challenge, we have launched pesticide residue reference materials whose concentrations have been precisely known. They can be used for testing instruments calibration, analytical methods verification, and ensuring that the qualities of soil, water, and food quality complies with national and international regulations, thereby maintaining environmental health and food safety.

- ✓ Insecticides
- ✓ Bactericides
- ✓ Mite Killing Agent
- ✓ Herbicide And Herbicide Antidotes
- ✓ Plant Growth Regulators
- ✓ Others







Veterinary Drugs Reference Materials

Veterinary drug residue reference standards are crucial substances used in the veterinary drug residue testing process.

CATO provides veterinary drug residue reference materials, offering reliable references for testing laboratories, allowing test results to be compared and verified against international standards. By using these standards, accuracy and precision of their testing methods laboratories can be ensured, thereby safeguarding food safety and animal health.

- **✓** Clenbuterol
- ✓ Malachite Green
- ✓ Sulfonamides
- **✓** Beta-receptor Agonists
- ✓ Hormones In Animal Derived Food
- ✓ Penicillins
- **✓** Quinolones
- ✓ Cephalosporins
- **✓** Tetracyclines
- **✓** Melamines
- ✓ Nitro Furan And Its Metabolites
- **✓** Nitromidazoles
- ✓ Others





Food Reference Materials

Food reference materials are crucial substances used for calibration, verification, and ensuring the accuracy of testing results during the food testing process. They have stable chemical properties, well-defined chemical structures, and known specific concentrations, enabling them to serve as reference benchmarks for calibrating food testing equipment, verifying the accuracy and reliability of analytical methods, and evaluating the accuracy and consistency of testing results.

- ✓ Food Additives
- ✓ Amino Acids(Organic Acids)
- ✓ Aflatoxin
- ✓ Fatty Acids And Esters
- ✓ Unsaturated Fatty Acids And Asters
- ✓ Vitamin
- ✓ Chemical Stain
- ✓ Others



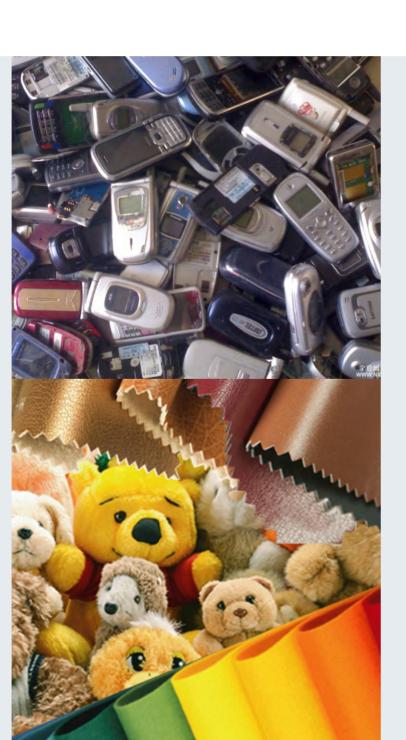


Consumer goods Reference Materials

Consumer product testing covers multiple areas, including textiles, toys, electronic products, cosmetics, and more. Corresponding reference standards may vary based on the characteristics and testing requirements of different consumer products.

Consumer goods reference materials provide reliable benchmarks for testing institutions, helping to ensure the accuracy and consistency of test results.

- ✓ Benzene
- **✓ PAHS PAHS**
- ✓ Dyestuff
- **✓** Flame Retardant
- ✓ Plasticizer
- ✓ Pesticide ,Preservatives
- ✓ Alkylphenol Polyoxyethylene Ether
- **✓** Fluorescent Whitening Agent
- ✓ Flame Retardant
- ✓ Amino Acids(Organic Acids)
- **✓** Organotin
- **✓** Nitrosamines
- ✓ Others





Environmental Reference Materials

Environmental testing is a crucial step in ensuring environmental quality. Whether you need to test soil, water, air, or waste, we can provide comprehensive solutions.

Our environmental reference materials cover substances such as amines, ketones, and aldehydes, among others, to meet various testing needs. Additionally, we provide complete certification documentation required for these reference standards, ensuring your testing work to be proceeded smoothly.

- ✓ Amines
- ✓ Surface Water Standards
- ✓ Volatile Organic Compounds
- **✓** Ethers
- ✓ Ketones
- ✓ Aldehydes
- **✓** Alkanes
- ✓ Olefines
- ✓ Fatty Alcohols
- ✓ PCBS Polychlorinated BiphenylsPCBS
- ✓ Others







Natural Products Reference Materials

Natural extracts primarily include plant extracts, traditional Chinese medicine extracts, and animal extracts, among others. Plant extracts are substances obtained by extracting or processing plants (or parts of plants) using appropriate solvents or methods.

The Natural products reference materials provided by CATO serve as crucial tools for evaluating the quality and purity of natural extracts, ensuring their quality and purity.

- **✓** Fatty acids
- ✓ Phenolic acids
- ✓ Anthraquinones
- ✓ Terpenoids
- ✓ Steroids
- ✓ Saponins
- ✓ Phenylpropanoids
- **✓** Flavonoids
- ✓ Alkaloids
- ✓ Carbohydrates
- ✓ Amino acids and peptides
- ✓ Others



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New Materials

Compared to traditional materials, new materials have novel structures, special functions, or excellent performance. These materials often adopt new technologies or concepts in aspects such as design, synthesis, processing, and application. With 13 years of profound research and development accumulation, CATO has mastered and become proficient in a variety of key synthetic technologies, covering areas such as directed nitration, high-temperature high-pressure reactions, precise condensation, controllable oxidation, selective fluorination, hydrogenation reduction, and non-toxic symmetric synthesis.

- ✓ Vaccine inactivator
- ✓ Pharmaceutical intermediates
- ✓ Photoresist intermediates
- ✓ Perovskite solar cell materials
- ✓ Organic solar cell materials
- ✓ Polyimide intermediate
- ✓ Organic light emitting material intermediates
- Others





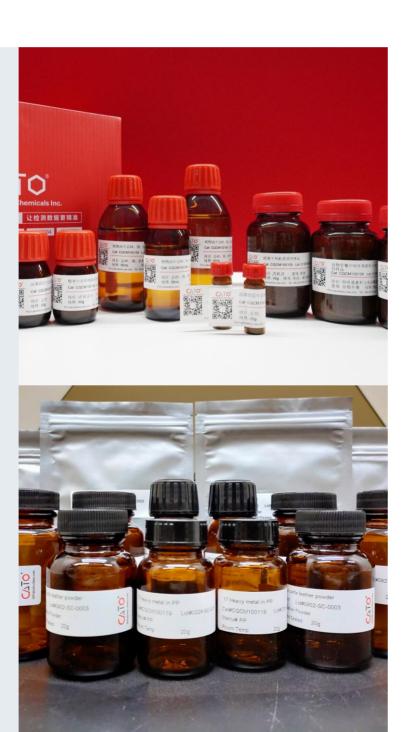




Quality Control Materials

Measurement laboratories need to use different Quality Control Models (QCMs) for different purposes. By using QCMs, measurement laboratories can demonstrate that a particular measurement system is under statistical control, so it is important to ensure that the most appropriate QCMs are used for a particular purpose.

- ✓ Veterinary drug residues
- ✓ Pesticide Residues
- ✓ Nutrient Analysis
- ✓ Contaminant Analysis
- ✓ Active Ingredient Analysis
- **✓** Additives Detection
- **✓** Toxin Detection
- ✓ Inorganic Element Analysis
- ✓ Physico-chemical analysis
- ✓ Microbiological
- ✓ Others







The only RMP accredited with ISO 17034 by CNAS and international organization

CNAS ISO 17034



ANAB ISO 17034

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

CATO Research Chemicals In

ISO 17034:2016

REFERENCE MATERIAL PRODUCER



SGS ISO 9001

Neat organic and Liquid solution reference materials

To verify our certificates

ANAB: https://search.anab.org/

CNAS: https://las.cnas.org.cn/LAS_FQ/publish/externalQueryRM.jsp

S G S: http://cx.cnca.cn/CertECloud/index/index/page



Product Certificate

Comprehensive analysis and detection support: moisture, UV, IR, HNMR, CNMR, NMR two-dimensional spectrum, optical rotation detection, element analysis, TGA analysis and residue analysis, etc.

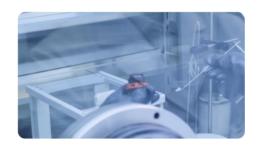






23000+ In-stock Rate

To formulate product demand plans, prepare in advance by using regulations, methods, and industry analysis of big data, CATO works with customers.



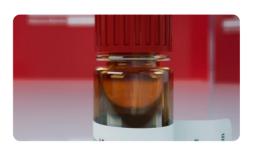
Stable Quality

The products are mainly solid, with better stability and validity period, which can be reused after opening.



Accurate & Reliable Measurement

NIFDC/NIM verification of detection capability、 PB (0.001 mg)、 Vacuum Glove Box (anhydrous & oxygen free weighing) .



Loss Avoidance

Mg level small package is packed in the special headspace vials to minimize the product loss.



Efficient Testing

One time detection of substances with the same component, shortens the sample detection process.

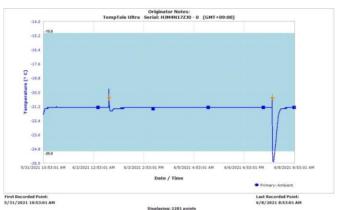




Professional Packaging

CATO packs the products with specified dry ice bucket or thick foam box together high density ice packs.





Specified dry ice bucket

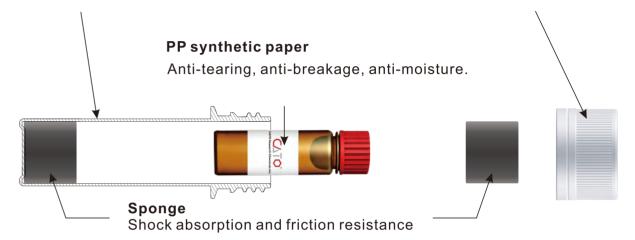
-20°C cold chain temperature monitoring

PP plastic bottle

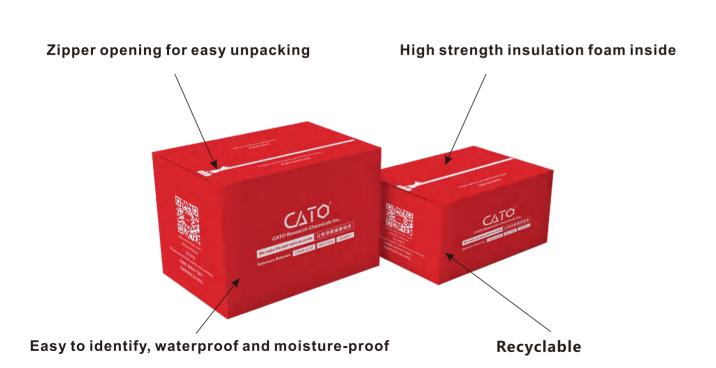
Has high shock-resistance, strong mechanical properties, resistance to a variety of organic solvents and acid-base corrosion.

Anti-theft bottle cap

A ring is bonded to the inner wall of the cap-top tailed by an anti-theft ring, ensuring that the product is opened for the first time.



20 meters falling down test passed





Make the Tests More Accurate



The CATO Website is the only comprehensive service platform for reference materials in China to realize the comprehensive correlation between products, regulatory methods and industry data. It is committed to helping customers to locate the products according to the regulations, which centralized the purchase, reduce the intermediate links and avoid the cumbersome procurement processes.

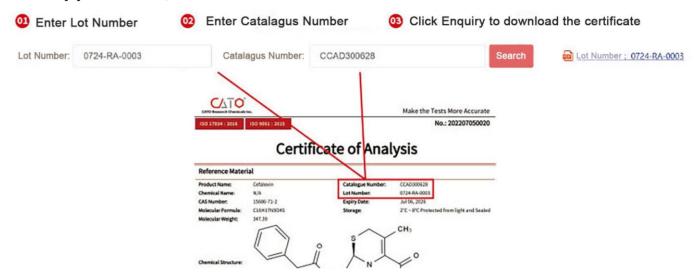
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