

Custom Synthesis

Since 1987, Isotec has been engaged in the custom synthesis of labelled compounds. Our synthesis team is comprised of an impressive group of experienced professionals who have performed thousands of synthesis projects. Combined with a large inventory of starting materials, Isotec can provide the fastest turn around time on custom synthesis which allows our customers to manufacture products and perform research with shorter time to market.

Our synthesis expertise includes

- Alkylations
- Assymmetric Synthesis
- Biosynthesis (Algae, Bacteria)
- Brominations & Iodinations
- Carbohydrate Chemistry
- Carbonylations
- Catalytic Reductions (High & Low Pressure)
- Diazotizations
- Diels-Adler Reactions
- Enzymatic Reactions
- Esterifications
- Friedel-Crafts Acylations
- Gas Phase Chemistry
- Grignard Reactions
- High Temperature & Pressure Reactions
- High Purity Distillations (Gases & Solvents)
- Optical Resolutions
- Oxidation Reactions
- Phosgenations
- Polymerizations
- Pyrolysis

Our years of experience in designing high yield chemical & biosynthetic routes for a wide variety of labelled compounds give Isotec an advantage to develop new processes for special needs.

Technical Know-How

- Pharmaceutical Intermediates
- Custom Synthesis of Unlabelled Products
- Biologically Active Molecules
- Controlled Drug Standards (DEA)
- Metabolites
- Isotopically Labelled Reference Standards
- Reference Standard Solutions (MNR, GC, GC/MS, LC/MS)

Analytical Resources

Isotec uses controls throughout all production processes to ensure superior product QUALITY, and the highest RELIABILITY and CONSISTENCY. Our analytical lab is equipped with state-of-the-art equipment using techniques including:

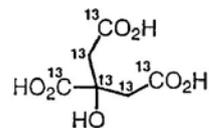
- High-Field NMRs
- Mass Spectrometers
- Gas Chromatography
- HPLCs
- FTIR
- Karl Fischer
- GC/MS
- V/VIS
- ICs

Isotec has been operating its cGMP lab since 1995. Our quality control staff strives to ensure superior product quality. Isotec's custom synthesis group provides products from mg to kg quantities.

Our willingness to help solve customer problems sets us apart. Your satisfaction is our highest priority and we go the extra mile to make your needs are met. For further information or to request a quotation, please contact us.

Rely on the Leader in Stable Isotopes for Custom Synthesis

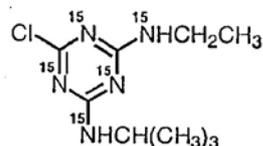
Since 1987, ISOTEC has been engaged in the custom synthesis of compounds labelled with stable isotopes. Our synthesis team is composed of experienced professionals and led by an impressive group of Ph.D. chemists. We have brought these experts together from such reputable institutions as Merck and Los Alamos National Labs stable isotopes programs to form an exceptional team at ISOTEC.



Citric Acid-¹³C₆

Your Advantage

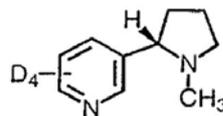
ISOTEC does not depend on any outside sources to supply our starting material. Today, ISOTEC is the only commercial producer that separates and enriches over 30 different stable isotopes, including ¹³C, ¹⁷O, ¹⁸O, ¹⁵N, and Deuterium. This independence gives us a tremendous cost savings and delivery time advantage in custom synthesis. Our on-site production capabilities and ready supply of basic starting material give ISOTEC a head start in providing rapid custom synthesis of new compounds.



Atrazine-¹⁵N₅

Stable Isotope Solution

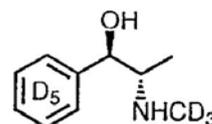
We routinely engage in the multiple step synthesis of isotopically labelled molecules, including metabolites, steroids and standards for environmental, drug, clinical and pharmaceutical applications. We will synthesize quantities ranging from milligrams to kilograms, and also can provide packaging services.



S-(-)-Nicotine-2,4,5,6-d₄

A Reputation of Excellence

We prepare custom synthesis compounds of only the highest purity and superior quality. Our custom synthesis experts are ready to offer you support for your orders and inquiries. Please contact us with your specific requests. Client confidentiality can be guaranteed



(1R, 2S)-(-)-Ephedrin-d₈

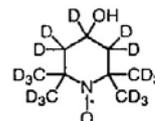
Rely on the Leader in Stable Isotopes for ESR Spin Labels

ISOTEC supports ESR applications through the synthesis of consistently high quality Spin Labels. As the world's largest commercial producer of stable isotopes, our labs are well equipped to fulfill all of your custom Spin Label needs.

The below compounds are a representative sample of Spin Labels currently available from ISOTEC. We can also fulfill your custom Spin Label needs. Over the years, we've built a reputation for excellence through our expertise in custom synthesis.

Custom Synthesis Experts

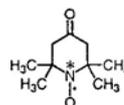
Our chemists have a wide range of experience and regularly produce custom synthesized compounds, giving ISOTEC a unique inventory. When we commit to the synthesis of a compound you can be confident we will deliver as requested. We test our compounds for isotopic enrichment and chemical purity, consistently providing the highest quality products researchers can rely on.



TEMPONE-d₁₆
>99 atom % D

Stable Isotope Solution

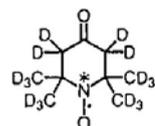
Do you need to change the splitting pattern of the spectrum? Consider using stable isotopes. ISOTEC makes compounds for ESR applications labelled with ¹³C, D, ¹⁴N, ¹⁵N, ¹⁷O, and other isotopes. We provide the finest products to researchers for ESR imaging, ENDOR, Pulsed ESR, and other ESR applications. We can meet the specific needs of your research.



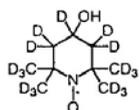
TEMPONE-¹⁵N
>99 atom % ¹⁵N

No Compromises on Quality

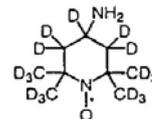
We won't compromise on Quality Control, because we know product integrity is key to our success – and to yours. Use Isotec Spin Labels for consistent, reliable results backed by knowledgeable technical support.



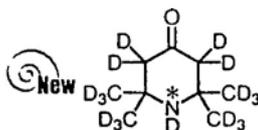
TEMPONE-¹⁵N, d₁₆
>98 atom % D
>99 atom % ¹⁵N



TEMPOL--d₁₇
>97 atom % D



TEMPAMINE-d₁₇
>98 atom % D



4-Oxo-2,2,6,6-tetramethylpiperidine-d₁₇, 1-¹⁵N
(Spin Label Intermediate)
>97 atom % D
<99 atom % ¹⁵N