



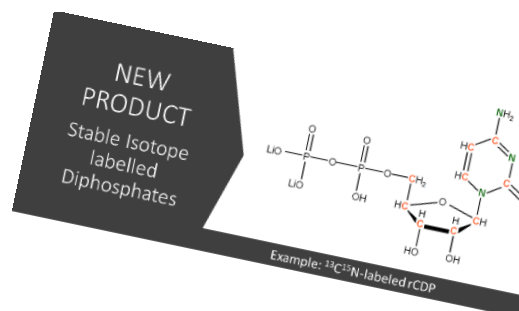
STABLE ISOTOPE-LABELLED NUCLEOTIDES

and enzymatic oligo synthesis service

Structural studies on large DNA and RNA molecules by nuclear magnetic resonance (NMR) require labelling of these molecules with stable isotopes.

Silantes offers a wide range of stable isotope labelled ribo- and deoxyribo

- Nucleosides,
- nucleoside monophosphates,
- nucleoside diphosphates and
- nucleoside triphosphates



in any combination of the **stable isotopes ^2H , ^{13}C and ^{15}N** for **enzymatic synthesis of oligonucleotides (see information on the opposite page)**. The **isotopic purity is >98 %**. The nucleotides are available in 10 mg or 50 mg quantities in solution as lithium salt. Modifications on request.

Silantes also offers stable isotope labelled phosphoramidites and a chemical oligo-synthesis service. Have a look at the currently available Silantes products and services at www.silantes-shop.com.

The Silantes technology of labelling nucleosides and nucleotides

Silantes stable isotope labelled nucleotides are prepared from bacterial DNA and RNA. The strain is a chemolithoautotrophic organism which grows on H_2 , O_2 and CO_2 . The extracted DNA or RNA is enzymatically hydrolyzed. The isolated 5'-NMPs are enzymatically phosphorylated to 5'-NDPs and 5'-NTPs and purified by IC and RP-HPLC.

This technology for in vivo enrichment of stable isotopes enables us to offer Silantes nucleosides and nucleotides at very competitive prices.

High quality, biological competence and ready-to-use

We guarantee an **isotopic enrichment of >98 %** with a **chemical purity of >95 %** determined by HPLC. Figure 1 shows an example of the HPLC elution profile of CTP.

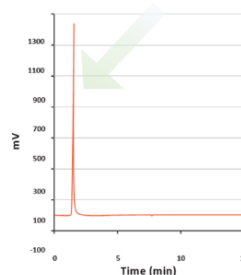
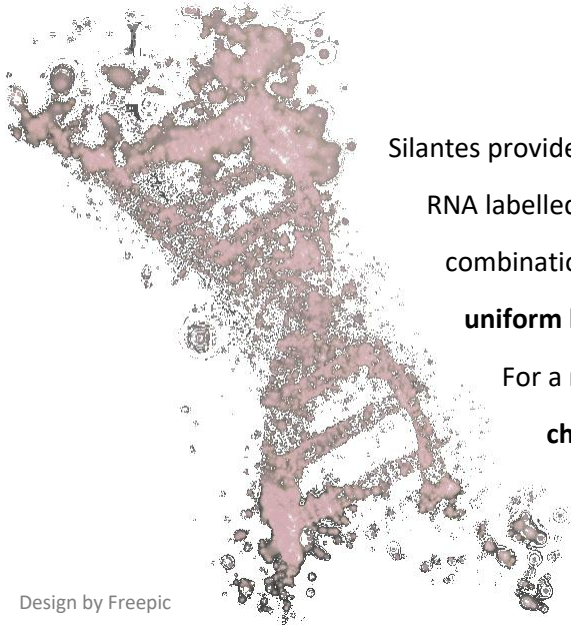


Figure 1: Analysis of CTP by RP-HPLC

The biological competence of the nucleotides is validated by in vivo synthesis of RNA or DNA, respectively.

Stable isotope-labelled nucleotides

AND ENZYMATIC OLIGO SYNTHESIS SERVICE



Design by Freepic

Silantes provides an enzymatic synthesis service for DNA and RNA labelled with the stable isotopes ^2H , ^{13}C and ^{15}N and combinations thereof. **This enzymatic approach allows uniform labelling of DNA and RNA fragments.**

For a nucleoside-specific labelling, please see our **chemical oligo-synthesis service**

at www.silantes-shop.com.

The price of the synthesis service

Please send us

- length of the oligo,
- sequence of the oligo (RNA sequences require a 5'-GG end),
- isotopic labelling and
- quantity.

Based on this information, we conduct a feasibility study for your project priced at 620 €. If the project is feasible and the synthesis service is ordered, the costs for the feasibility study get reimbursed.

The delivery time is 6 weeks.

Exemplary project

With our custom oligo-synthesis service, we conducted a great number of prestigious projects to success. One example is the following synthesis of an *E.coli* promoter sequence:

Length: **23-mer**
Sequence: **d(GGGACACGGCGAATAGCCATCCC)**
Isotopic labelling: **^{13}C , ^{15}N (uniformly, >98%)**
Quantity: **1 mg**

This project was successfully realized at a price of 2380 €.