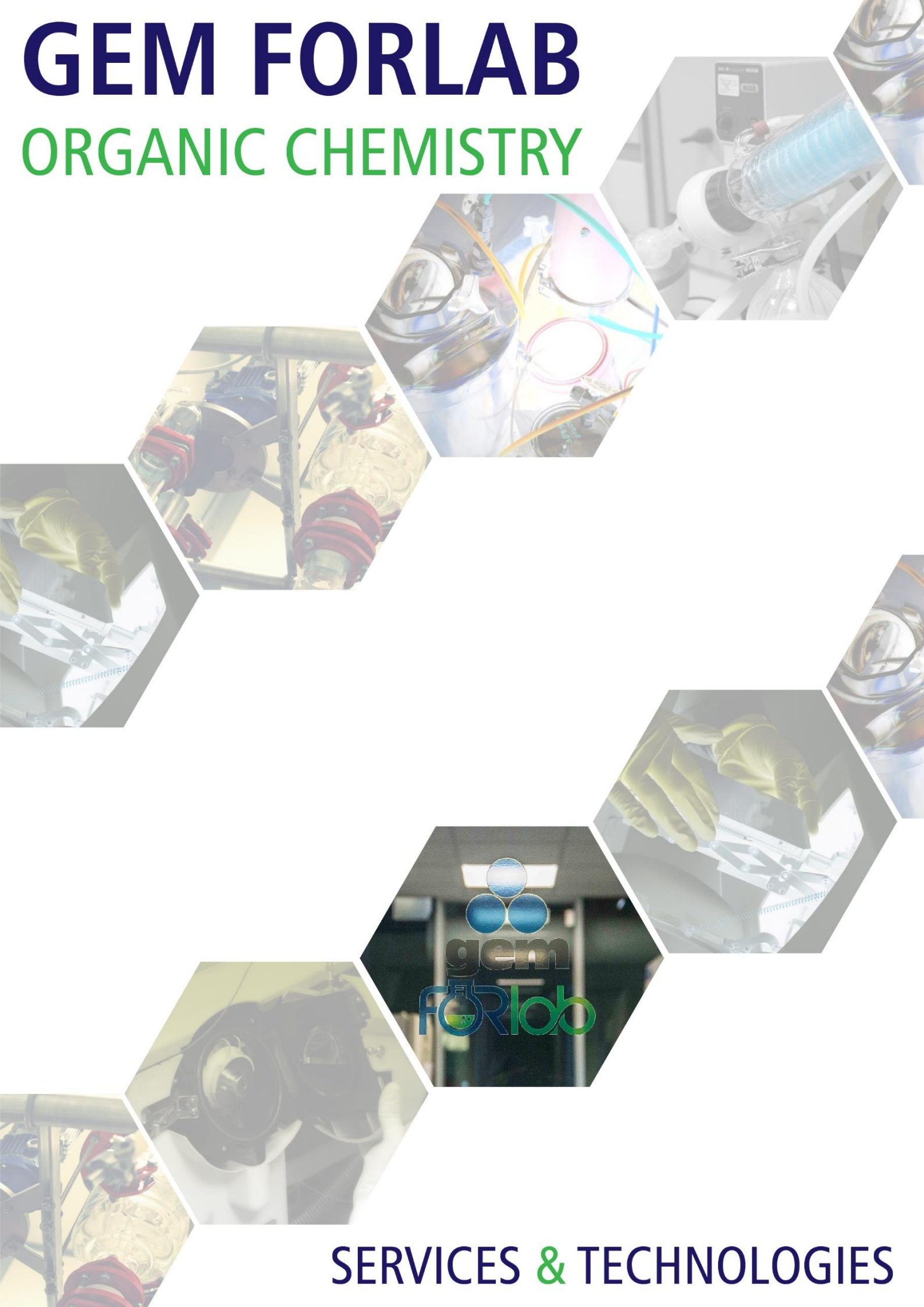


GEM FORLAB

ORGANIC CHEMISTRY



SERVICES & TECHNOLOGIES



GEM FORLAB

GEM FORLAB carries out chemical synthesis of essential components for early drug discovery such as:

- chemical intermediates
- process impurities
- reference compounds
- drug metabolites
- pro-drugs
- bioconjugates
- targeted molecules for MRI and others molecular imaging techniques;

GEM FORLAB can assist in the process of lead generation and optimization and analytical characterization of synthesized compounds.

We perform the isolation of Impurities from starting materials, intermediates, APIs and drug products and offer high quality analytical and separation services through chromatographic systems.

Our team offers organic synthesis to produce compounds from milligram to kilogram scale for medicinal chemistry, process R&D.





SERVICES


SYNTHESIS PATHWAYS & PRODUCT SYNTHESIS

- Development of new synthetic pathways;
- Optimization of critical synthetic steps;
- Search for green synthetic strategies;
- Synthesis of desired products (from milligrams to hundred grams scale);
- Small molecules.

ISOLATION & CHARACTERIZATION

- New compounds from reaction crude;
- Extraction/purification of unknown compounds from complex matrices;
- API impurities.

CONJUGATION

- PEG derivates;
 - Biomolecules;
 - Phospholipids;
 - Fluorescent probes;
 - Biotin.
- 



EQUIPEMENT

PURIFICATION EQUIPEMENT

- Gel permeation / gel filtration (SEC);
- Ion exchange resin purification;
- Polymeric stationary phase;
- FPLC.

SYNTHESIS EQUIPEMENT

- Small & large scale evaporators;
- Glass reactors up to 10 liters scale;
- Laboratory freeze dryer
- Micro & small laboratory scale tubes.

ANALYTICAL EQUIPEMENT

- Analytical FPLC;
- Moisture analyzer;
- Mass Spectrometers (ESI, Q-TOF).



CATALOGUE

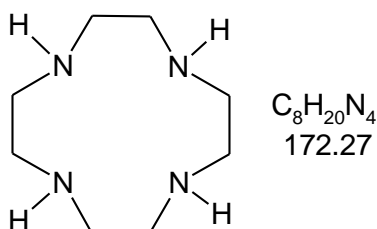
GEM FORLAB - Chemistry Lab has a strong experience in synthesis of chelating agents such as DOTA, NOTA and other derivatives.

These molecules are widely used for conjugation with peptides, antibodies, PEG etc. for nuclear medicine and as contrast agents for MRI.

GEM FORLAB - Chemistry Lab offers a wide range of ready-to-use bifunctional chelating agents and functionalized/ protected macrocycles from milligrams to kilogram scale.

DO3A tri-tBu*HBr

Cyclen

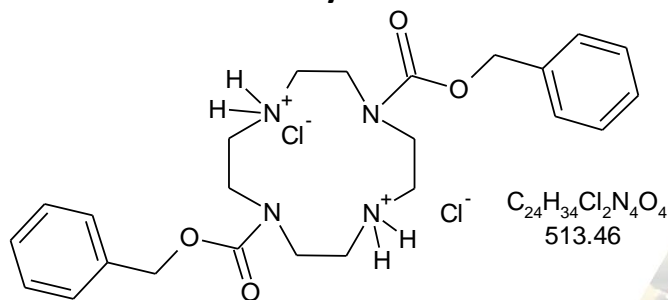


$C_8H_{20}N_4$
172.27

IUPAC: 1,4,7,10-Tetraazacyclododecane

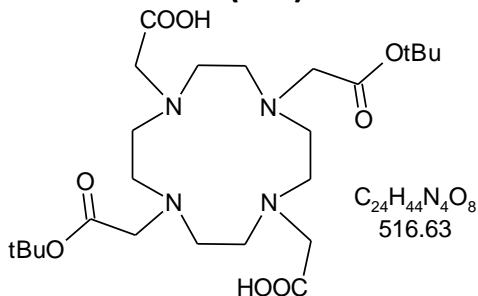
CAS: 294-90-6

Bis-CBZ Cyclen*2HCl



$C_{24}H_{34}Cl_2N_4O_4$
513.46

DOTA di(tBu) ester

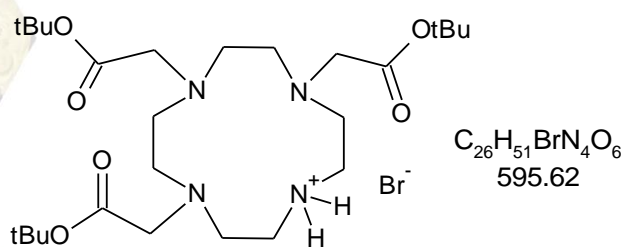


$C_{24}H_{44}N_4O_8$
516.63

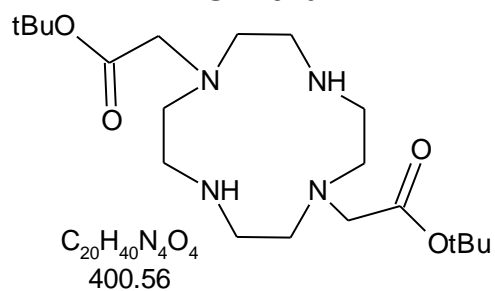
IUPAC: 1,4,7,10-Tetraazacyclododecane

CAS: 913542-71-9

DO3A tri-tBu*HBr

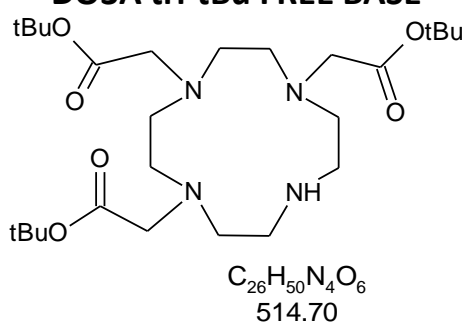


DO2AtBu



CAS: 162148-48-3

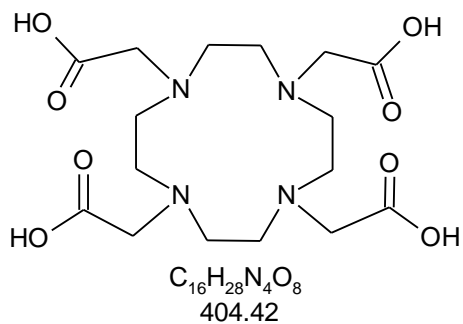
DO3A tri-tBu FREE BASE



IUPAC: Tri-tert-butyl 1,4,7,10-tetraazacyclododecane-1,4,7-triacetate

CAS: 122555-91-3

DOTA

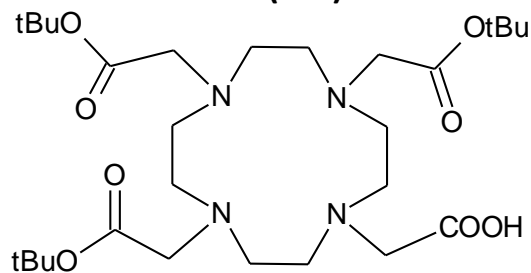


IUPAC: 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid

CAS: 60239-18-1



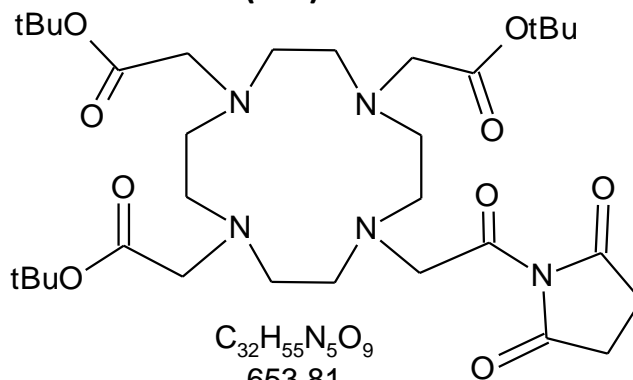
DOTA-tris(tBu)ester



$C_{28}H_{52}N_4O_8$
572.73

IUPAC: Tri-tert-butyl 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetate
CAS: 137076-54-1

DOTA-tris(tBu)ester NHS ester



$C_{32}H_{55}N_5O_9$
653.81

CAS: 819869-77-7





SEDE LEGALE - AMMINISTRATIVA

Via Maestri del Lavoro, 25 - 12022 Busca (CN)

SEDE OPERATIVA

Via ing. Comotto, 36 - 10014 Caluso (TO)

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