



SENAI

Innovation Institute

for Green Chemistry

INSTITUTO SENAI
DE INOVAÇÃO QUÍMICA VERDE

SENAI Innovation Institute for Green Chemistry

Our mission is to contribute to the strengthening of the Brazilian industry, through the greening of its value chain, based on the principles of green chemistry through the exchange of experiences, research, development and innovation (RD&I).

*Nationwide Network Of
SENAI Innovation Institutes,*
specialized in 25 different
research areas, contributes
to the development of new
industrial products and
processes.

SENAI **Innovation Institutes**



Main Industrial Sectors



**Energy • Pharmaceutical and Cosmetic Industry • Petrochemistry •
Construction • Biofuel • Chemistry • Food and Beverage Industry**

Outstanding lab structure for the development of projects in RD&I

Chromatography

HPLC

DAD
Fluorescence
Refractive index
Ion exchange

UPLC

Mass spectroscopy (triple quadrupole)
DAD

Supercritical CO2

FID
DAD

GC

Mass spectroscopy
FID
NPD

Physico-Chemical Analysis

Titrimetric
Potentiometric
TOC
Refractive index

Inorganic Analysis

Elemental analyzer for Carbon, Nitrogen, Oxygen and Sulfur
ICP-OES
ICP-MS

Spectrometry Analysis (UV/Vis/IR)

Photobioreactors

Fermenter

Extraction with

supercritical CO2

High pressure reactors

Molecular Biology

Quantitative PCR
DNA Sequencer

Technological Basis

- Green Analytical Chemistry
- Treatment and reuse of wastewater
- Development of new added-value products from waste and other materials
- New technological routes for extraction
- Greening the oil and petrochemical value chain
- Green Nanotechnology application
- Biotechnology

Expectations for the GEF-UNIDO project

- **Contribute to improve Green Chemistry in Brazil**
 - **Education**
 - Awareness-raising on GC
 - Specialists training on GC
 - **Industry**
 - Contribution to overcome technical and economic challenges of GC

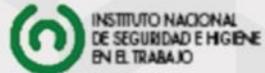
SIIGC Perspectives

- **Industry**
 - Global grants for the development of GC projects for the Brazilian industry
- **Science**
 - Development of new processes and products based on GC concept

Partnerships



Massachusetts Institute of Technology



Finnish Institute of Occupational Health



UFRJ



instituto de química
Universidade Federal do Rio de Janeiro



Agroindústria de Alimentos
Ministério da Agricultura, Pecuária e Abastecimento



Ministério da Saúde • Fundação Oswaldo Cruz



PUC
RIO

Centro de Pesquisa Nacional:



MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E INOVAÇÃO

Centros de Pesquisas Internacionais:



Universidade:



UFRRJ

UNIVERSIDADE FEDERAL RURAL
DO RIO DE JANEIRO

Our team



Thank you!