



**MINERALI INDUSTRIALI
ENGINEERING**

**CENTRAL
LABORATORY**

Masserano (BI)

Minerali Industriali Engineering Laboratory

The Technological Laboratory has always played a fundamental role in the company strategy, supporting the mining activity in all its phases: research and geological extraction, industrial tests, production analysis, new products development.

Thanks to the specialization and experience of its laboratory, Minerali Industriali Engineering can interact effectively with the customers, quickly satisfying their requests.

The Team

The Team of the Central Laboratory (ISO 9001-2015 certified) is made up of 5 people who have been working for years to achieve the objectives set out in the company's annual plan.



Simone Salvetti

Class of 1970
12 years in Minerali

Head of Laboratory,
Quality and ESG

Stefano Savino

Class of 1978
22 years in Minerali

Specialized technician for
the Ceramics sector and the
production control of the
Specialties sector

Stefano Vegis

Class of 1976
26 years in Minerali

Technician specialized in
dry and wet mining
treatments

Carlo Baglietto

Class of 1966
23 years in Minerali

Analytical and
Technical Manager
specialized for the
Glass Sector

Simona Bonincontro

Class of 1989
4 years in Minerali

Technician specialized in
preparations, production
controls and internal
coordination
'sustainability in lab'

Fields of competence

The Technological Laboratory has a wide range of instruments for the execution of the characterization tests of industrial minerals such as quartz sands, feldspathic sands, quartz, kaolin, clay, olivine and for the simulation of several industrial treatments.

The Technological Laboratory also supports Minerali Industriali Engineering in its waste enhancement activities (ceramic and glass for example).

70.000

analytical tests per year carried out all over the laboratories in Italy e in the world

8.000

analytical tests per year carried out at the Central Lab

Research & Development

A significant part of the annual budget is dedicated to R&D Projects for the study of new technologies, new formulations of ceramic mixers and new solutions for the requalification of non-hazardous industrial waste.



Thanks to technical skills gained over the years and thanks to the continuous collaboration with institutions such as universities and polytechnics, today Minerali Industriali Engineering is able to offer great technological flexibility for the treatment of raw materials, thus allowing the study and supply of customized products.

Projects

External R&S Projects

Since 2011, Minerali has closed with success 3 European projects co-financed by LIFE program of the European Commission playing the role of leader:

- ⊙ SASIES for the recovery and enhancement of industrial sludge for environmental sustainability;
- ⊙ UNIZEO for the study of an innovative slow-release urea-based fertilizer coated with natural rock;
- ⊙ SANITSER for the introduction of recycled glass in the production of ceramics for sanitary use.

Minerali also participates as partner in the SUNRISE project co-financed by Horizon2020 program of the European Commission for the research of innovative tools useful for the recycling of PVB from laminated glass.



Internal R&S Projects

Sector	Number of Projects
Ceramic sector	17
Glass sector	8
Specialties sector	15

Quality

- 9 types of products, used for bituminous conglomerates and concretes, have obtained the CE marking
- One product has also obtained the **EPD** (Environmental Product Declaration) Certification, issued by a third party accredited
- One sand got **product certification** that authorizes its use in the approved synthetic footballs fields at professional level.



CERTIFIED MANAGEMENT SYSTEM

A long tradition: our
**Management System of
Quality** is certified since 1995.
We got the updating on the
Certificate according to the **UNI
ENISO 9001: 2015** standard.



Our commitment to sustainability

The Central Laboratory operates by carefully monitoring its impact on the internal and surrounding environment.

Separate waste collection is carried out extensively and involves all the products in use: paper, plastic, aluminum, organic, mineral powders.

From 2021, the Laboratory uses **reusable glass** or **steel** containers for sample processing, having reduced the use of 'disposable' trays by **75%** (which are also disposed of in dedicated collection).

2023 GOALS

- **'Plastic free' laboratory**
in relation to the personal use of plastic
- **20% reduction in energy consumption**
thanks to the rationalization and optimization of operational activities



LABORATORY TESTS

■ CHARACTERISATION ANALYSIS

■ SPECIFIC TESTS

■ MINERAL DRESSING

■ CERAMIC PREPARATIONS AND TREATMENTS

CHARACTERISATION ANALYSIS

Sample preparation for chemical analysis

Sample preparation for chemical analysis (fused beads)

XRF determination

Sample preparation for powder diffraction

Qualitative analysis by diffraction and interpretation

Loss on ignition (1100°C)

Carbon - Sulfur determination (LECO)

High melting determination

Heavy minerals determination with heavy liquid

Dry grain size distribution with vibro-sieve

Air particle size analysis with Alpine air-jet

Wet grain size distribution

Laser grain size distribution

Moisture determination

SPECIFIC TESTS

Specific gravity determination

Soluble salts (chlorides and sulphates)

Metallic Iron determination

Colorimetric determination on dry powder

Colorimetric determination on wet powder

Colorimetric determination on fired samples

Calcimetry

MINERAL DRESSING

Dry magnetic separation

Wet magnetic separation

Electrostatic separation

Flotation test

Acid leaching test

Alkaline leaching test

Washing

Friction washing

Gravimetric separation with shaking table or spiral

CERAMIC PREPARATIONS AND TREATMENTS

Crushing
Milling
Wet grinding for gres or single firing
Dry grinding for gres or single firing
Dry grinding for sanitaryware
Preparation of cones with ventilated powder
Pressed specimens for firing tests
Firing in muffle with gres or single firing
Firing in muffle with sanitary cycle
Firing in roller kiln
Glaze tests
Linear shrinkage and water absorption determination
Module of rupture
Specific surface determination
Support for sanitary cones preparation



Contacts

MINERALI



INDUSTRIALI



ENGINEERING

A COMPANY OF THE GROUP

MINERALI



INDUSTRIALI

Central Laboratory

Frazione Cacciano

13866 Masserano - BIELLA

Ph.: +39 015.9517057

Administrative headquarters

Piazza Martiri della Libertà 4 - 28100 Novara

Ph. : +39 0321.377600 - E-mail: info@min-ind.it

www.mineraliindustriali.it