

The Geoscience paradigm: resources, risks and future perspectives



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EcoCalMix Project (Ecofriendly Mix based on Calabrian clay for tanning applications): the use of local clays for eco-sustainability in the tanning sector

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INTRODUCTION AND AIMS

The tanning sector and its supply chain, in order to be competitive in the current market, needs to invest in new technologies to improve processes and product quality while respecting the environment.

In this context, the present project aims to develop a non-invasive and ecologically sustainable product to be applied in the finishing systems of the tanning process thanks to the development of completely innovative formulations based on clay nanoparticles with multifunctional characteristics (antimicrobial, binders, fillers, etc) and with low environmental impact to respond to the need to improve a production process.

The experimental results acquired so far use eco-friendly, fully recyclable and low-cost materials. The use of natural clayey raw materials therefore makes it possible to create a new product which not only reduces production costs and guarantees high performance but also responds to a growing demand for environmental sustainability that comes from both industrial users and consumers, able to respond even the most stringent environmental and safety legislation.

The low environmental impact gives these matrices a high content of sustainability which is increasingly appreciated every day and represents an important competitive advantage on ALPA's international market.

PLAN OF THE RESEARCH ACTIVITIES AND TIMETABLE

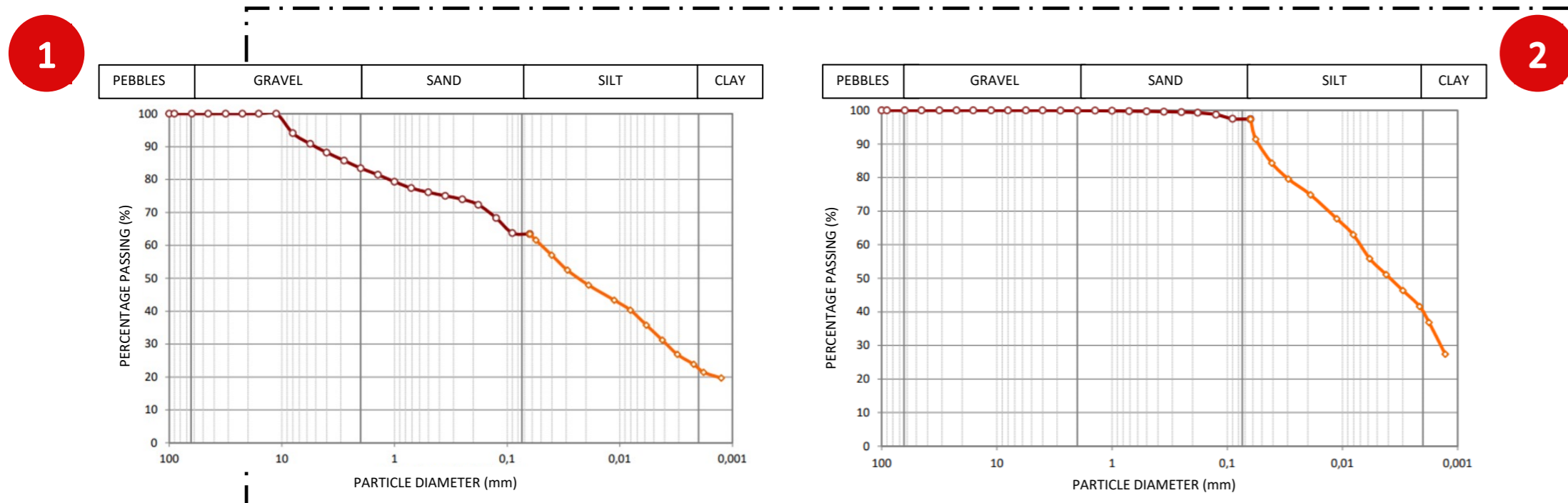
Work Package 1 – WP1 Selection of clayey raw materials, selection of the type of tanning material to be treated (3 MONTHS)

Work Package 2 – WP2. Application of treatments (classic and with new formulations) to selected skin types (12 MONTHS)

Work Package 3 – WP3. Comparison between the various types of treatment and choice of the solution with the best performances (3 MONTHS)

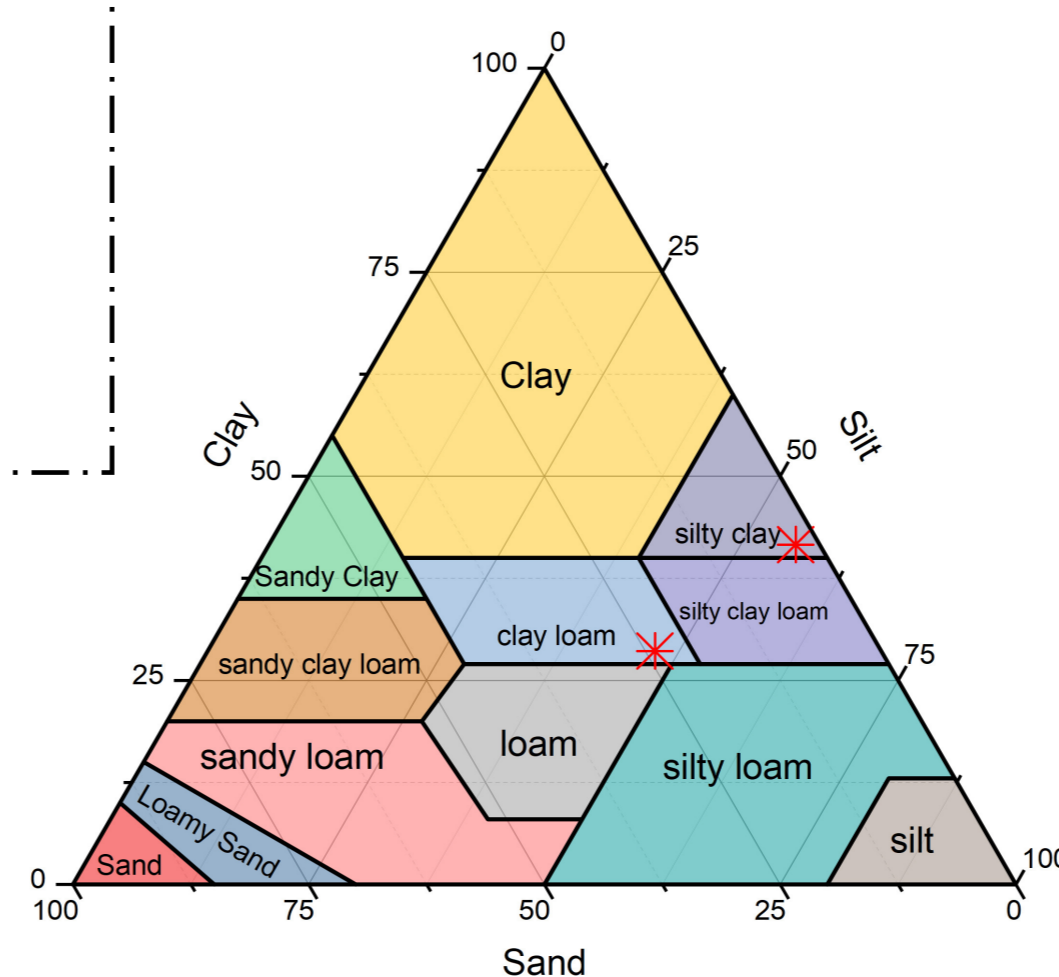
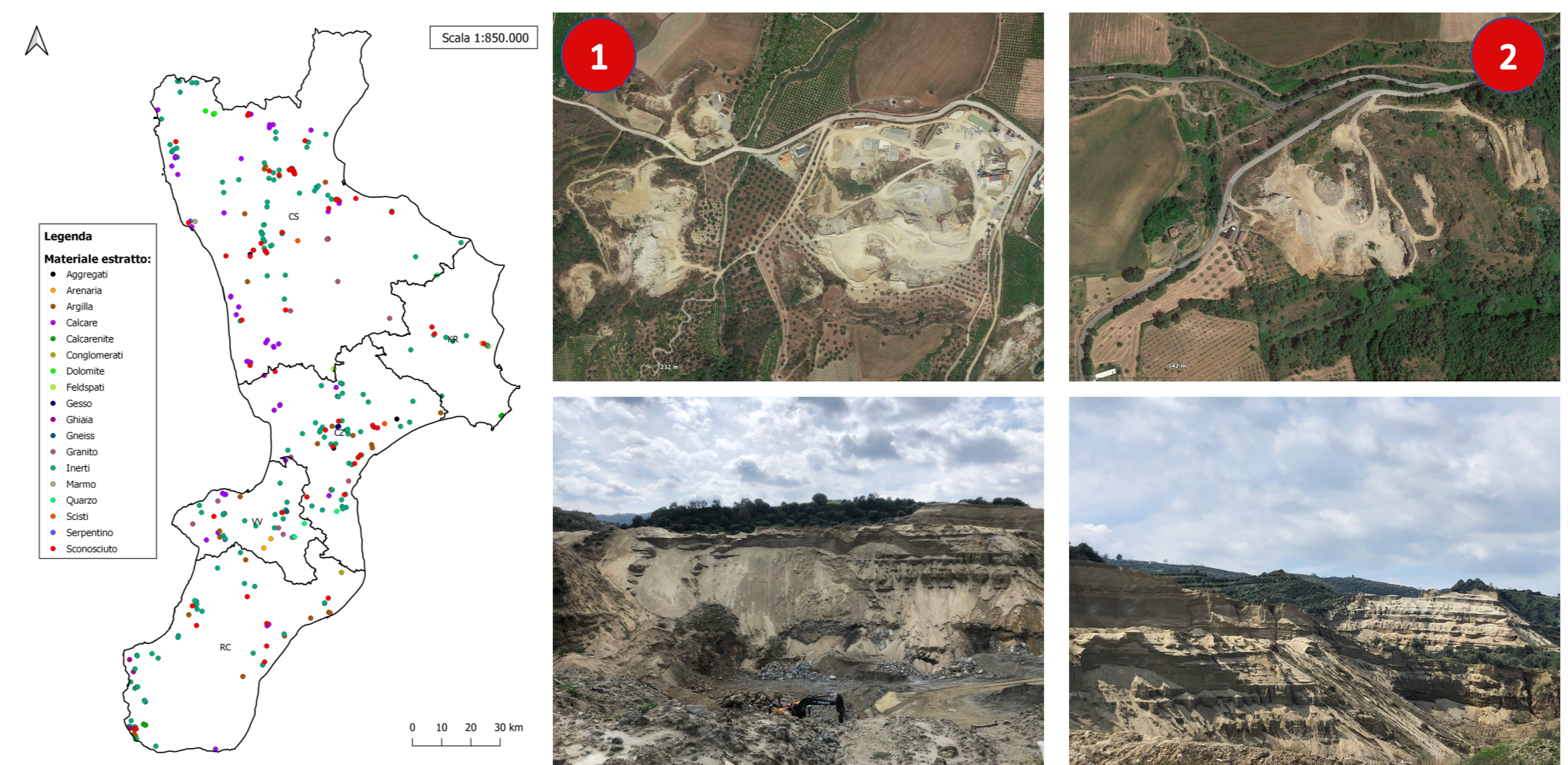
Work Package 4 - WP4. Project coordination and management (18 MONTHS)

Work Package 5 - WP5. Dissemination and exploitation of results (6 MONTHS)



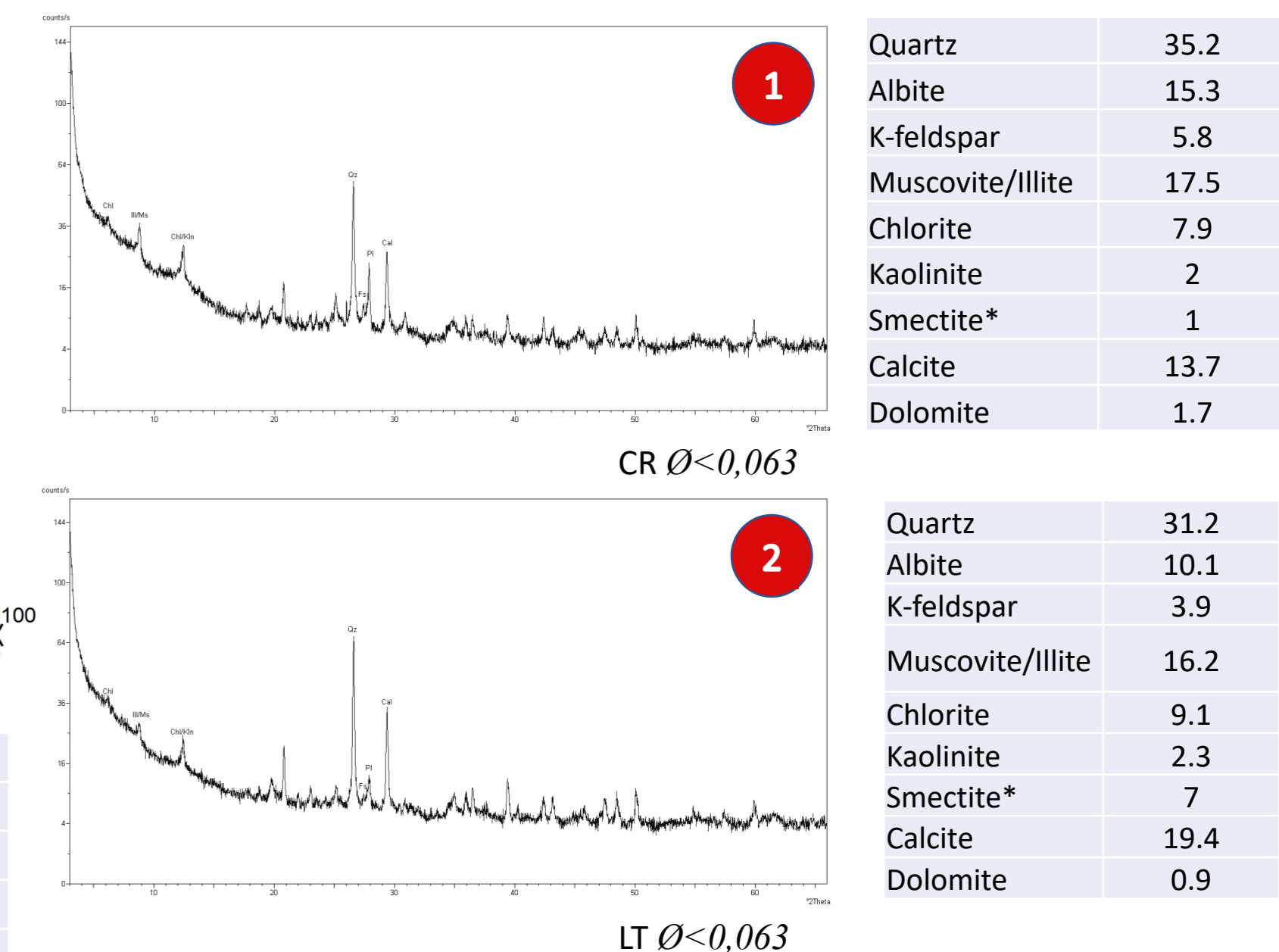
1 – CORIGLIANO ROSSANO 2 – LATTARICO

Work Package 1 – WP1

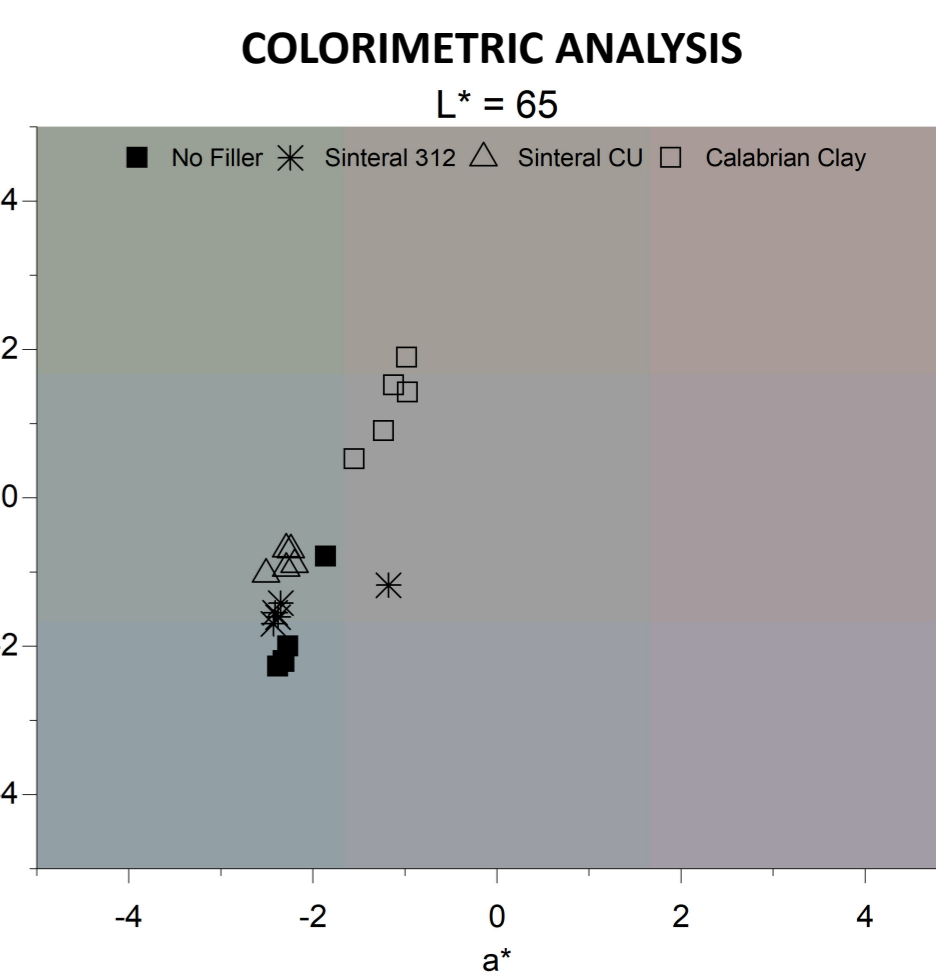
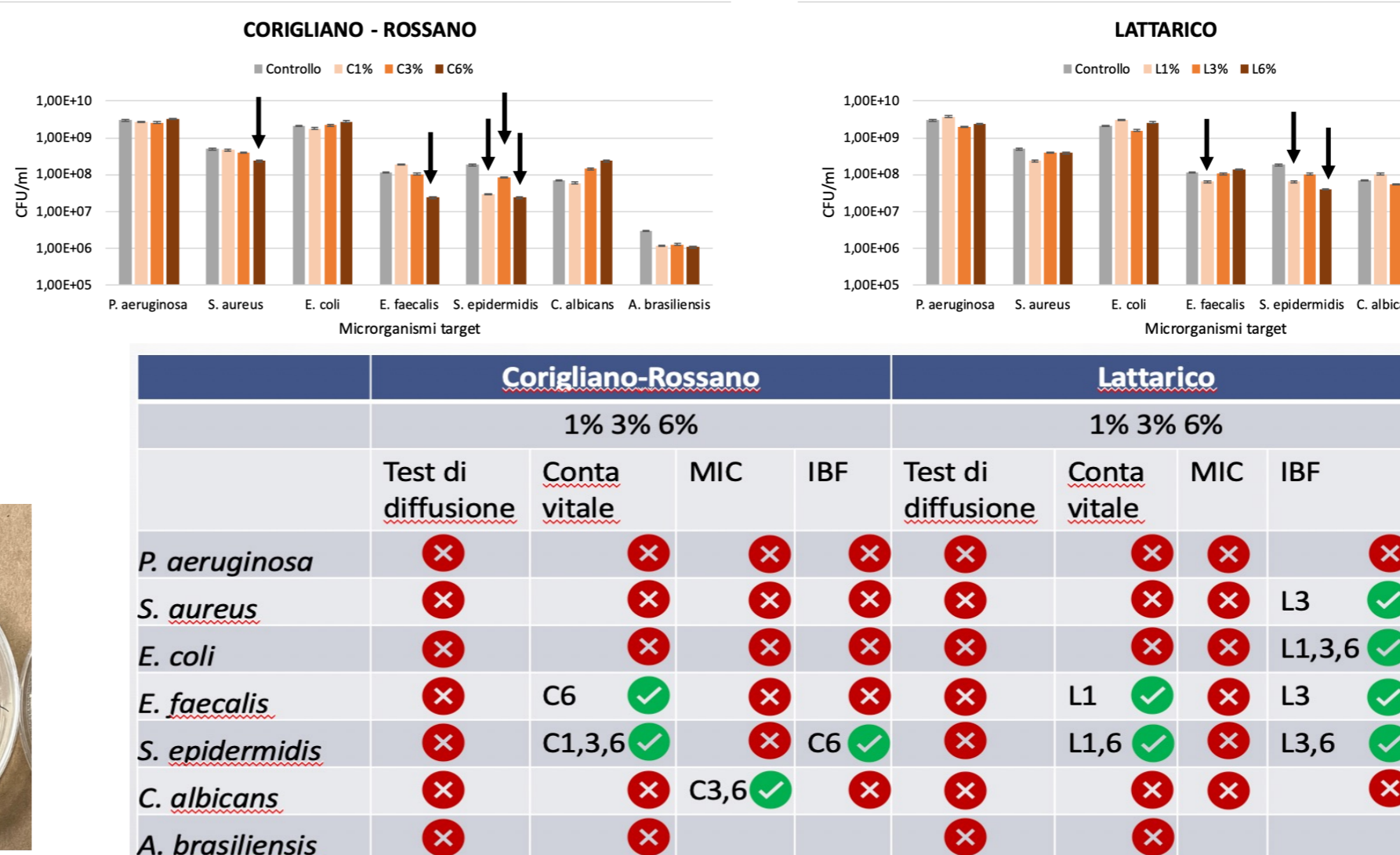
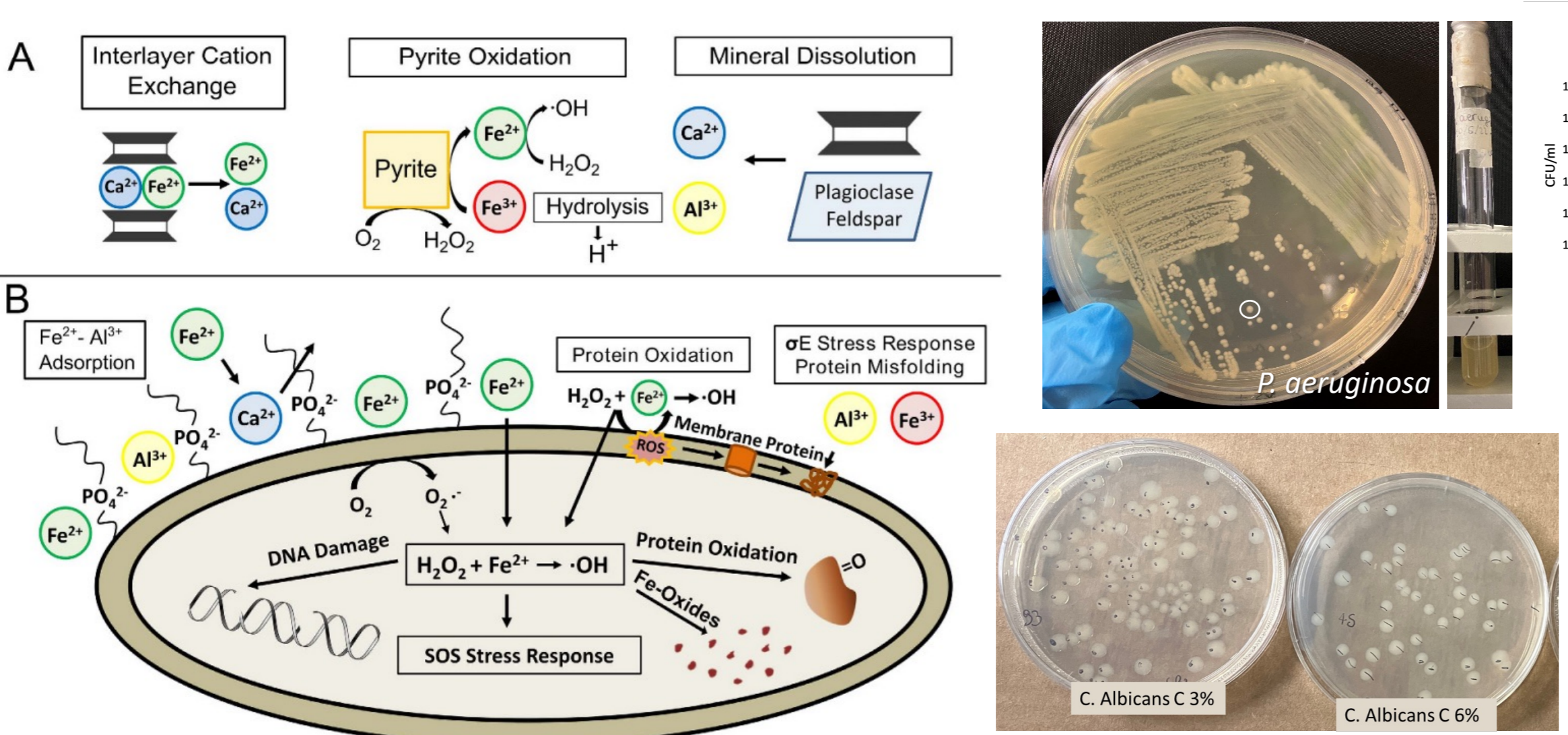


SAMPLE CODE	COR_ROS	LAT
Smectite	4	19
Muscovite/Illite	56	44
Chlorite	27	28
Kaolinite	13	9

BULK MINERALOGY AND CLAY SPECIATION



Work Package 2 – WP2/Work Package 3 – WP3



CONTACT ANGLE MEASUREMENT

