

Fig. 1: Schematic illustrating the experimental approach: 2 types of stem cultivation were used, i.e. (a) and (b) with their corresponding type of exposure, foliar or root, to Pb-FAP contamination. Each pot shown in the figure was replicated 3 times, thus giving a total of 15 Pots in the experiment.

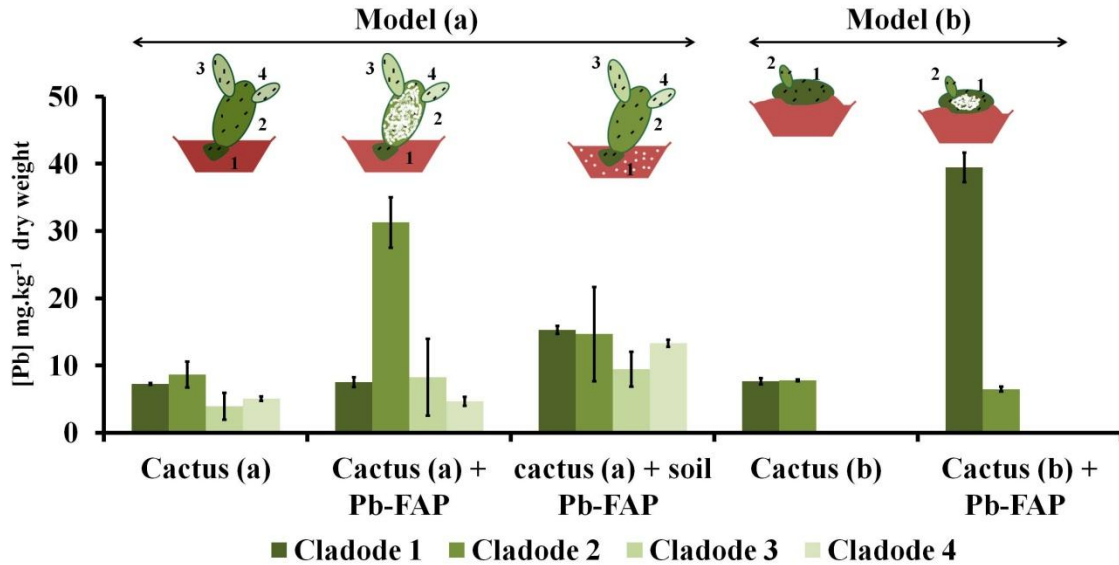


Fig. 2: Total concentrations of lead (mg.kg^{-1}) in cactus claddodes that are investigated under 2 conditions: cactus (a) and (b) are reference plants, cactus (a) + Pb-FAP and cactus (b) + Pb-FAP correspond to foliar exposure and finally cactus (a) + soil Pb-FAP correspond to root exposure. The standard deviation is determined from triplicate assays.

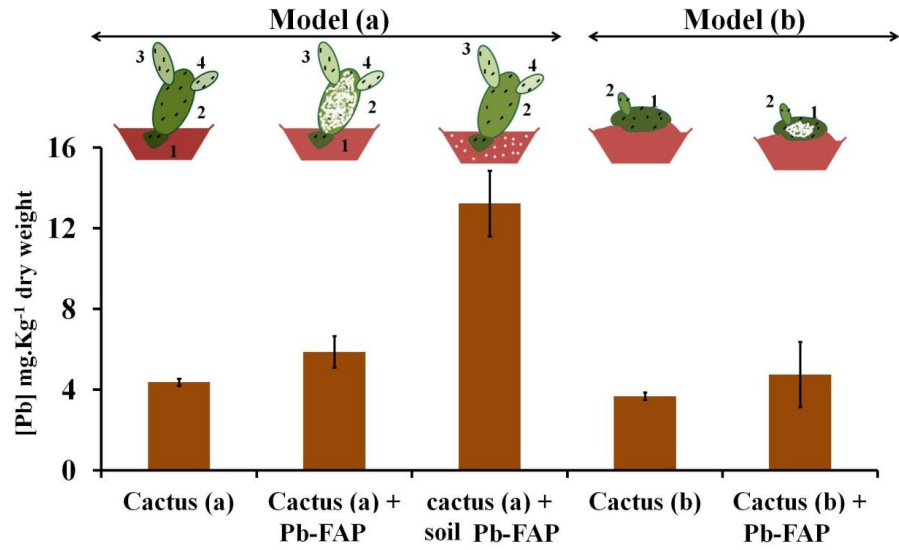


Fig. 3: Total concentrations of absorbed lead (mg.kg⁻¹) in roots.

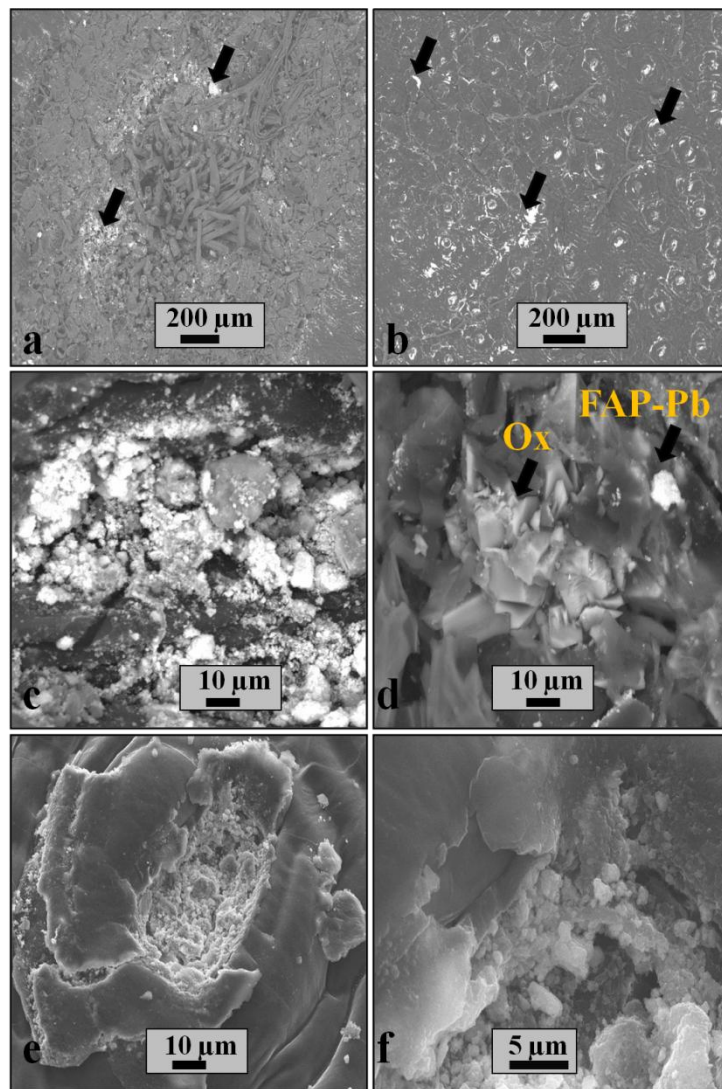


Fig. 4: (a) (b) (c) and (d) represent typical BEI micrographs showing Pb-FAP particles on the cladode surface, particularly those integrated in the areole structure (a, c and d) and the cuticle or the stomata (b). Also shown are Pb-FAP particles on the surface of calcium oxalate crystal (Ox) (d). (e) and (f) represent SEI micrographs illustrating the incorporation of fine particles as well as aggregates in stomata.

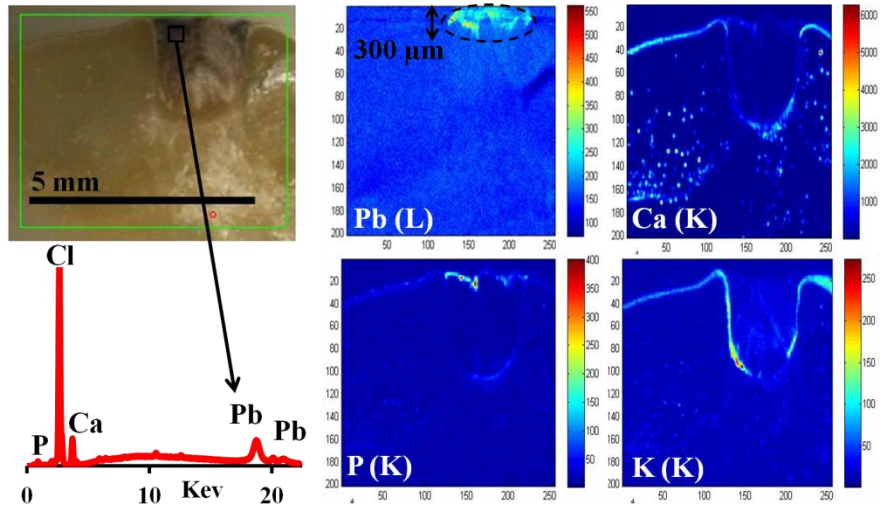


Fig. 5: Image of a cladode fragment (areole) embedded in resin. μ XRF elemental maps illustrating the distribution of lead, phosphorus, calcium and potassium in the embedded cladode fragment along with a typical μ XRF spectrum obtained on the areole surface (lead enriched region).

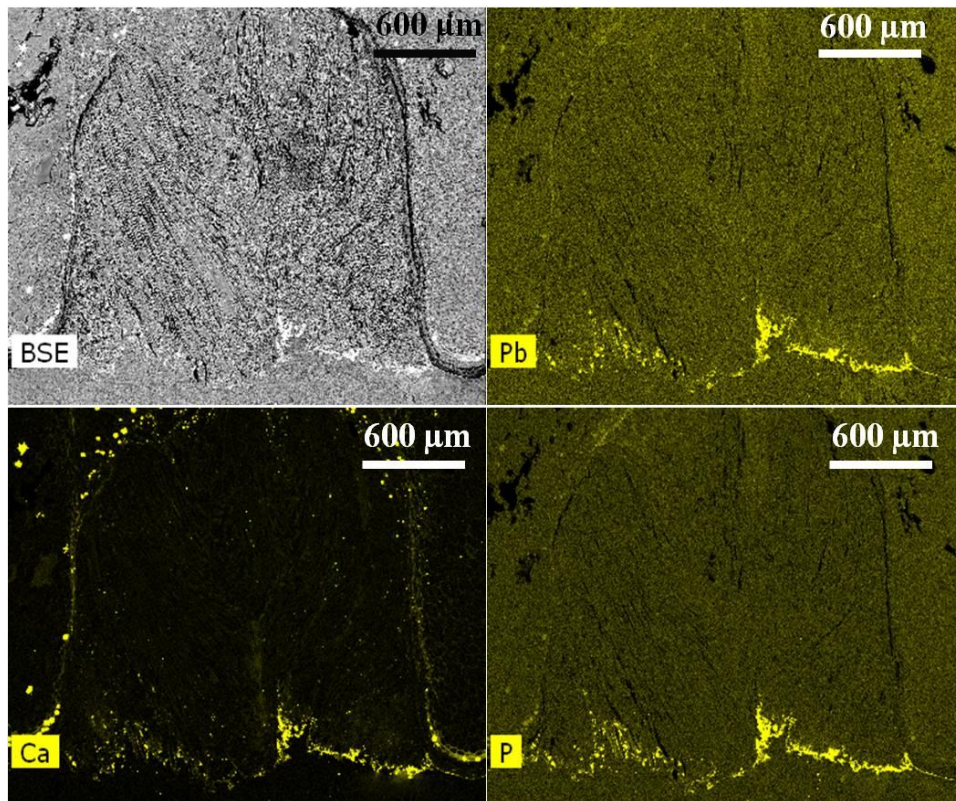


Fig. 6: BSE images showing the elemental maps of Pb, Ca and P in the areole zone.