



LABORATÓRIO DE INSTRUMENTAÇÃO
E FÍSICA EXPERIMENTAL DE PARTÍCULAS
partículas e tecnologia

Radiation, Health and Environment

3 PhD researchers

2 PhD students

4 Master students

Effects following exposure to radon-containing aerosols in *Mentha spicata* L. (Lígia Lopes)



Mentha spicata L.

Radon

Environment

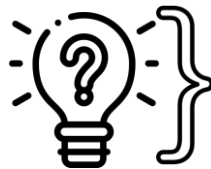


Concentration



- Active & passive method
- New detector

Bioremediation



Evaluate the effects of radon absorption in exposed *MS* to determine their potential as bioremediatory

Properties

Mentha spicata L commonly known as 'hortelã' in Portugal: is an antiallergic, antioxidant, antimutagenic, analgesic, etc.



Capacity

- Antioxidant
- Absorption

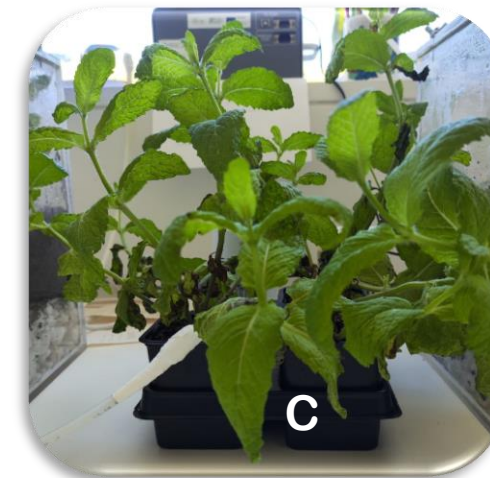




Radon measurements

Concentration

- Passive method, using CR-39 detector.
- Active method, using RAD7 – DurrIDGE detector.
- New detector (under development).



Chamber A: Plants with radon exhaling rocks

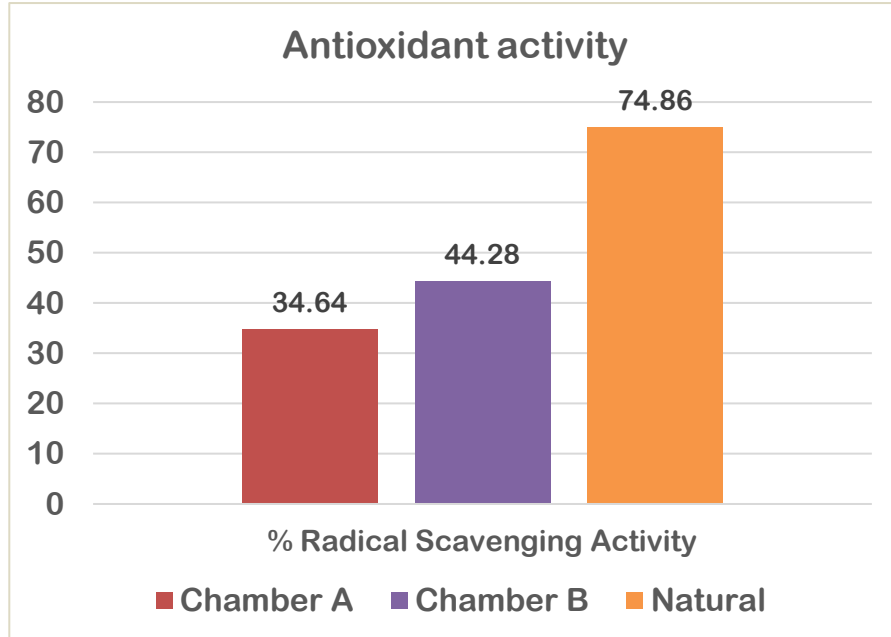
Chamber B: Plants without rocks.

No chamber C: plants, kept in the natural environment.



Preliminary results

Antioxidant activity



Appearance of the plant immediately after collecting leaves and stems



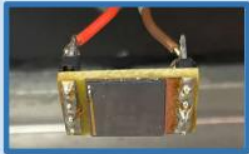
Radon concentration

Method	Group	Specific activity (kBq · m ⁻³)
Passive	A	> 138
	B	7 ± 1
	C	6.4 ± 1.0
Active	A	323 ± 3
	B	2.9 ± 0.2
	C	0.04 ± 0.01

Radon monitor (Nuno Taborda)

1

Detection and amplification



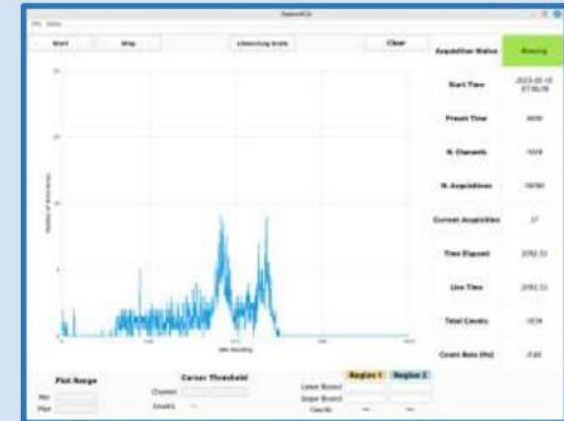
2

Signal processing and conditioning



3

User interface/results display



Comprehensive Evaluation of Natural and Anthropogenic Radionuclides in Beiras and Serra da Estrela: Distribution, Dissemination and Radioprotection Strategies within NORM management.

(Caroline Licour)

