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COMMERCIAL AND WILD *VISCUM ALBUM* L. ETHANOLIC EXTRACTS: PHYTOCHEMICAL, ANTIOXIDANT, AND IRRITATION POTENTIAL

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Abstract: The investigation of the pharmacological effects of the active ingredients found in two types of mistletoe led to the following results: a low content of total polyphenols, next to increased antioxidant activities, and a biocompatibility of the extracts on chorioallantoic membrane.

• Introduction

- known as the European mistletoe
- widely used in traditional medicine (urticaria, high blood pressure)
- currently used in cardiovascular pathologies, degenerative joint diseases, and oncology

• Material and method

Two samples: *Visci folium cum stipites* → VAc (commercial) and VAr (harvested)

Extraction: 80% ethanolic extracts

drying → pulverization → umectation →
ultrasonication → filtration → concentration →
drying → refrigeration



Folin-Ciocalteu method: total polyphenolic
content → $\mu\text{g GAE/g}$ dried extract

DPPH assay: antioxidant capacity, using ascorbic
acid as control

HET-CAM test: *in vivo* assay
using chicken chorioallantoic
membrane (CAM) → evaluation
of the irritative potential

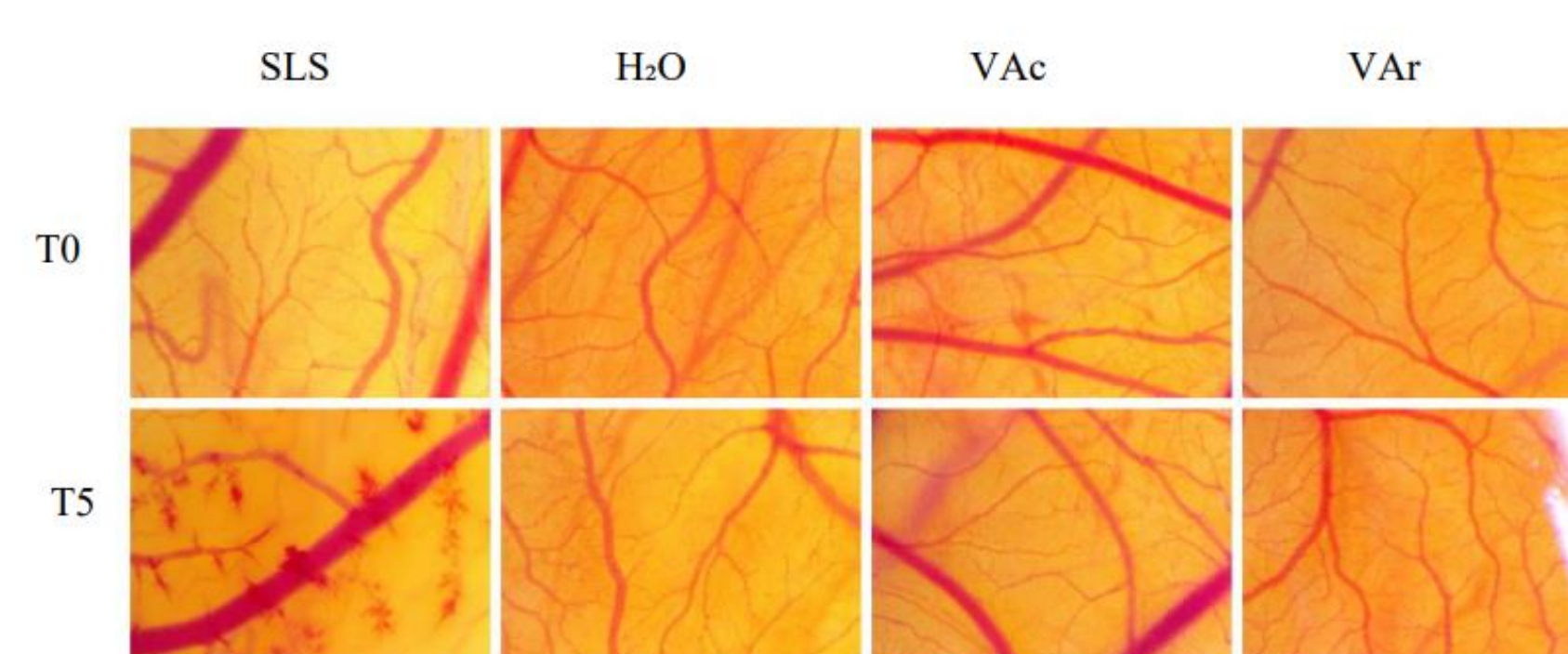
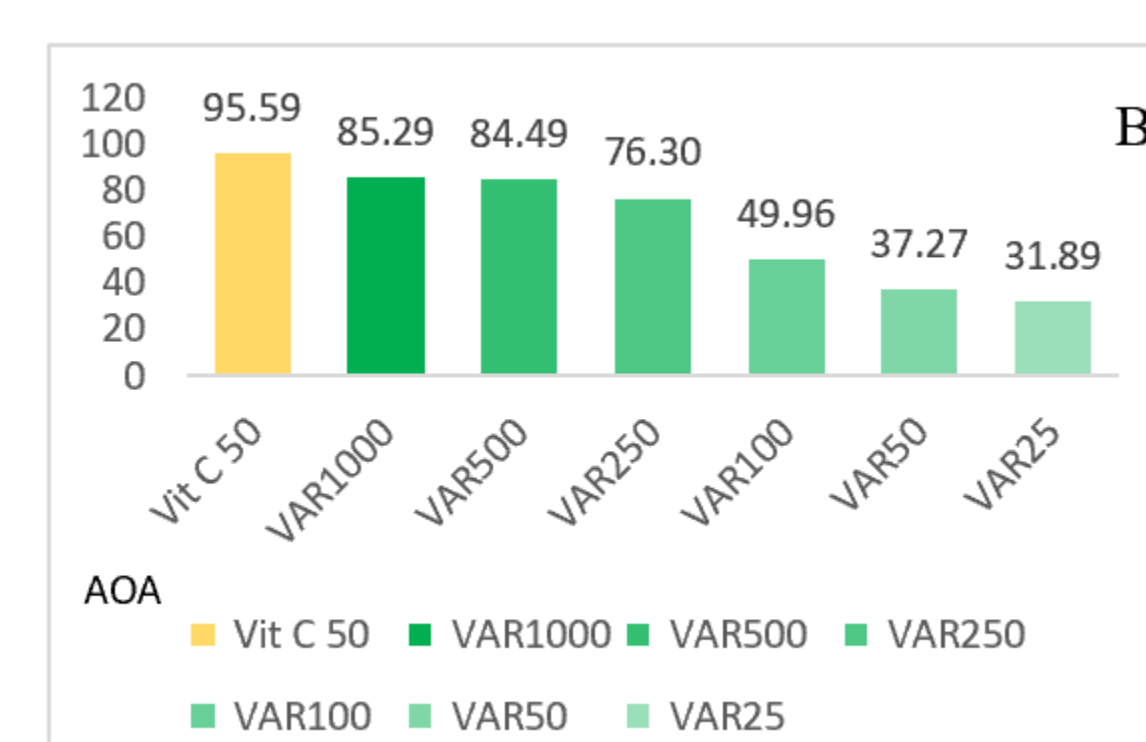
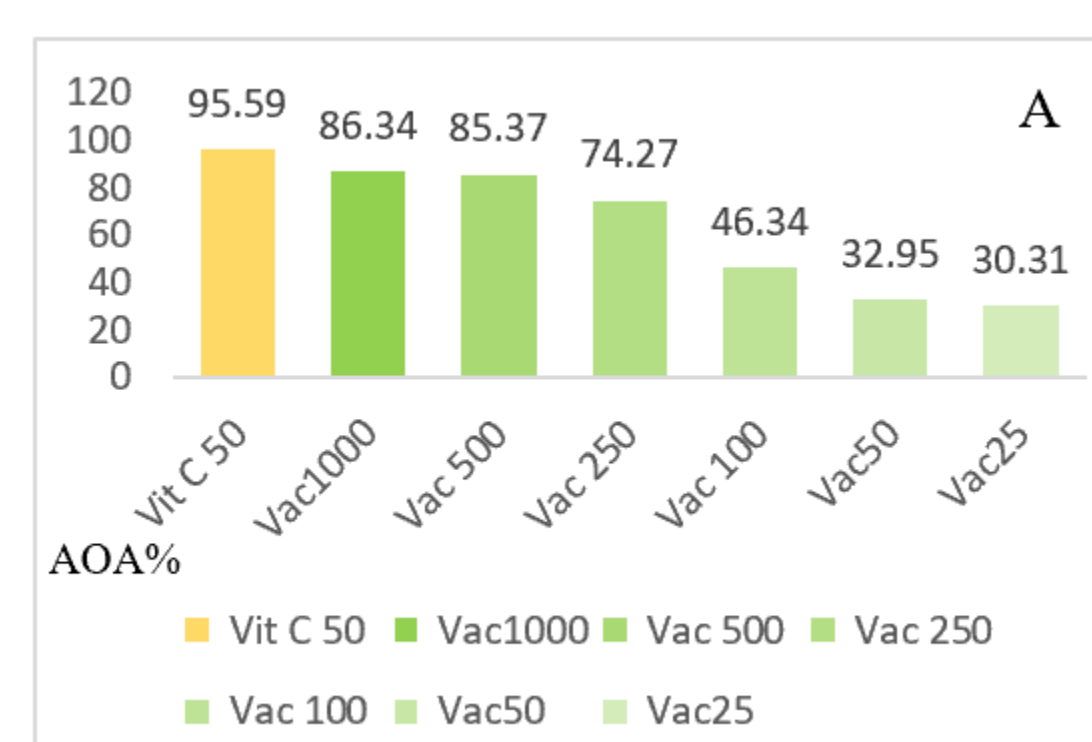


• Results and discussions

Folin Ciocalteu method

Sample	Abs 750 nm	$\mu\text{g GAE/g}$ dry extract
VAr	2.035	205.38
VAc	2.018	203.50

DPPH assay



	HET-CAM Score Range	Irritation Category
VAc, VAR, H2O	0-0.9	Nonirritant or Practically None
	1-4.9	Weak or Slight Irritation
	5-8.9 or 5-9.9	Moderate Irritation
SLS	9-21 or 10-21	Strong or Severe Irritation

From Luepke (1985) and Kalweit et al. (1987)

• Conclusions

The results showed a relatively low content of total polyphenols, next to **increased values of antioxidant activity**. The HET-CAM test demonstrated the **biocompatibility** of the extracts with application at the level of vascularized epithelia, showing **no irritating effect** on CAM, thus to be considered for further studies with multiple cosmetic and bio-medical applications.