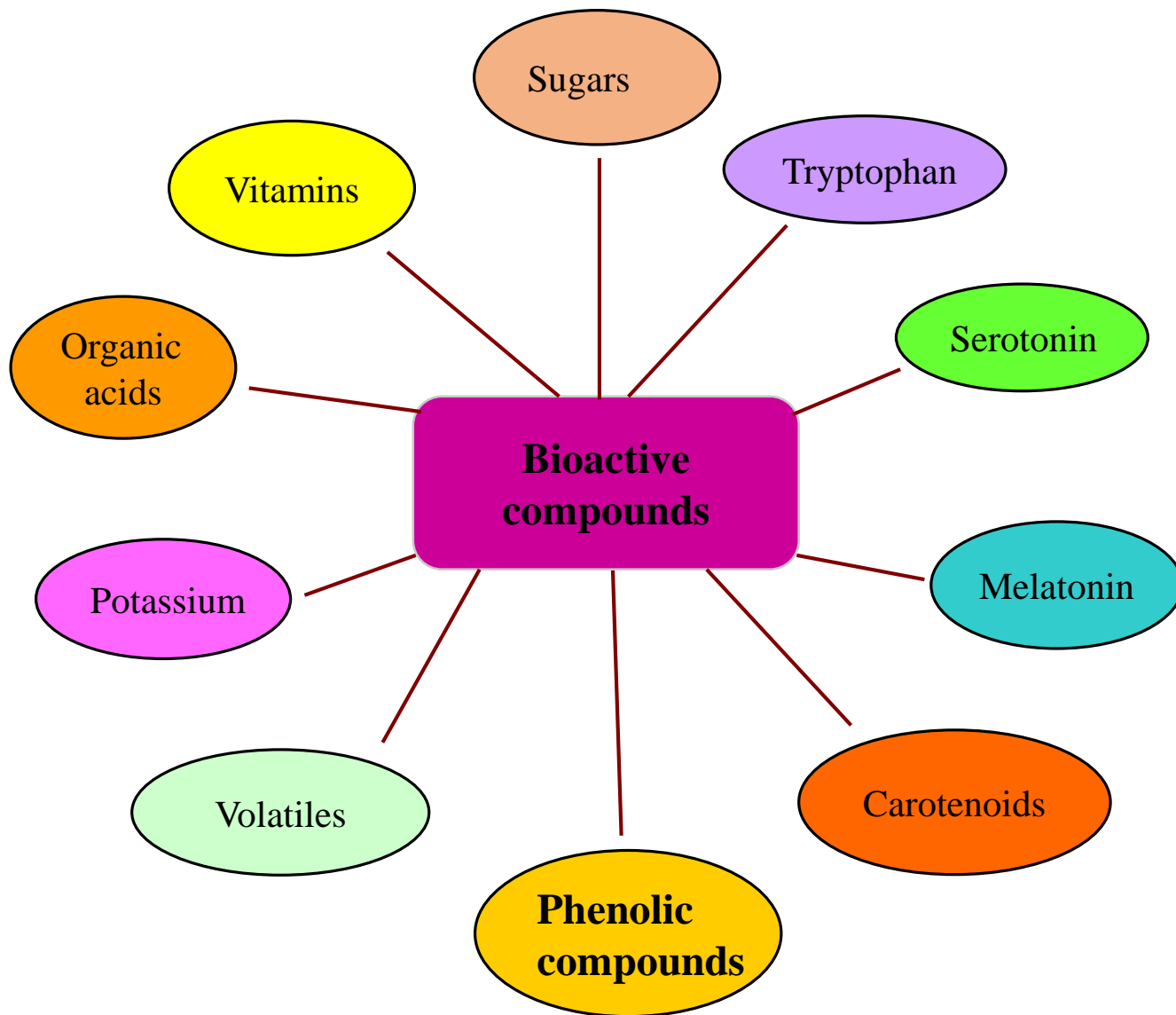


Physical and Phytochemical composition of sweet cherries from Fundão and their properties as health promoters



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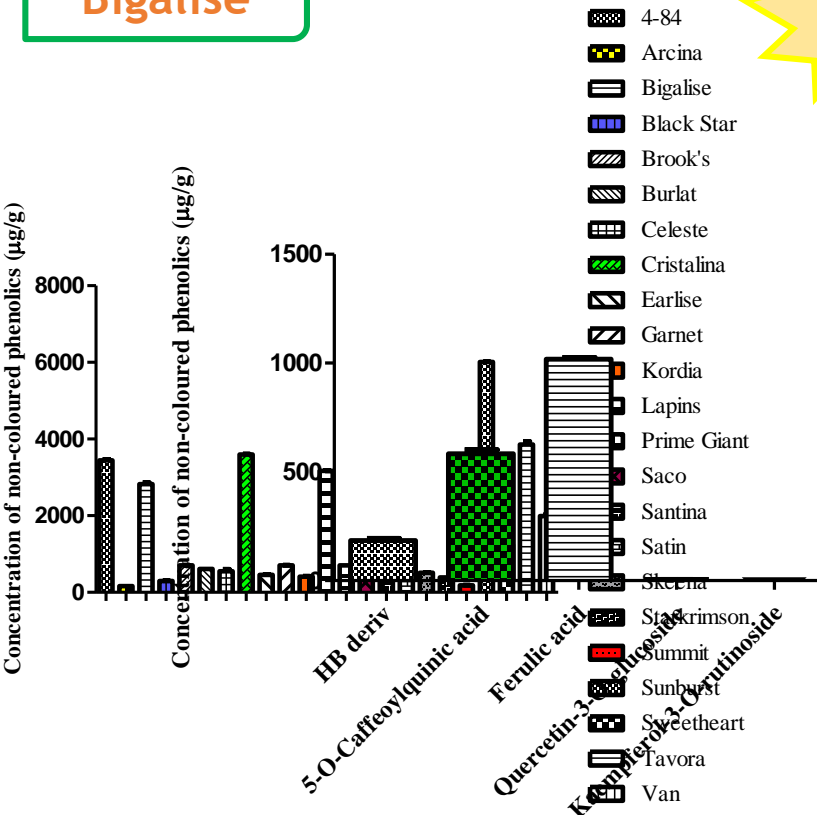
42 Phenolic compounds were tentatively identified. There were found 19 hydroxycinnamic acids, 2 hydroxybenzoic acids, 13 flavonols, 5 flavan-3-ols, 2 flavanones, 1 flavanonol.

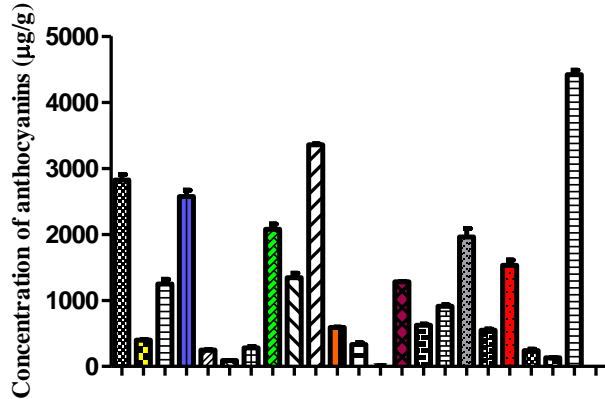
Bigalise

Chlorogenic, pCQA and ferulic acid were the most dominant compounds in 23 samples. Sunburst and Tavora were the richest (6015.75 and 4027.59 µg/g of dw, respectively).

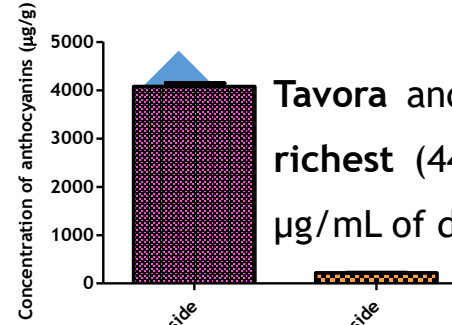
A total of 15 non-coloured phenolics were quantified in Bigalise, including:

- ❖ 1 HB acid deriv
- ❖ 12 HC (ferulic was the predominant)
- 5 HC deriv
- 7 p-Coumaric acid deriv
- ❖ 2 flavonols

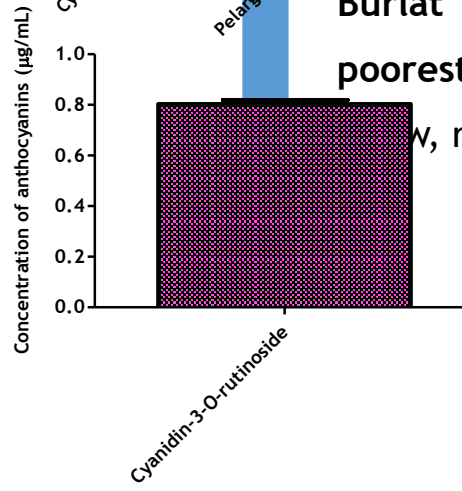




- 4-84
- Arcina
- Bigalise
- Black Star
- Brook's
- Burlat
- Celeste
- Cristalina
- Earlise
- Garnet
- Kordia
- Lapins
- Prime Giant
- Saco
- Santina
- Satin
- Skeena
- Starkrimson
- Summit
- Sunburst
- Sweetheart
- Tavora
- Van

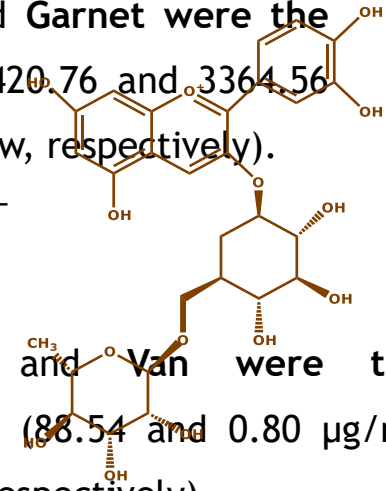


Tavora and Garnet were the richest (4420.76 and 3364.56 µg/mL of dw, respectively).



Burlat and Van were the poorest (88.54 and 0.80 µg/mL dw, respectively).

Cyanidin-3-O-rutinoside

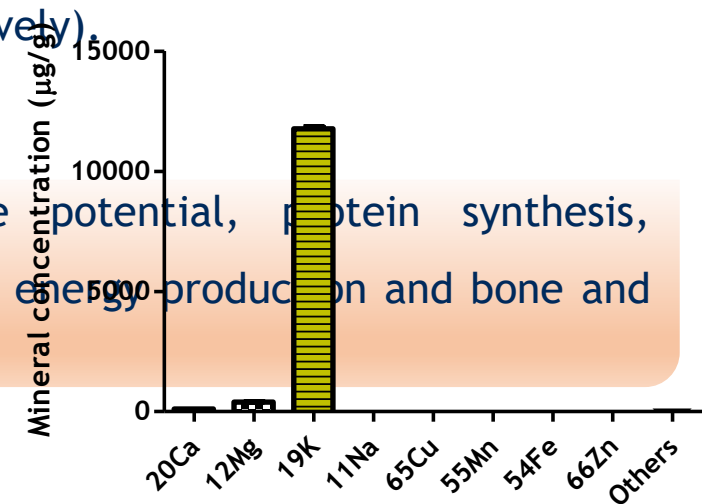
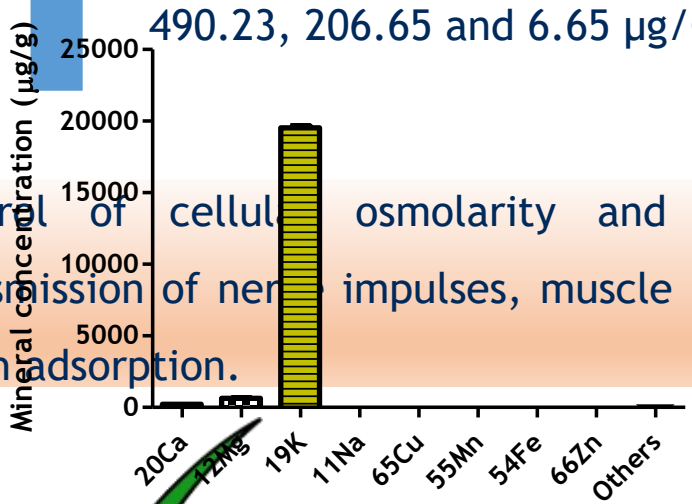


27 minerals detected

Celeste High amounts of K, followed by Ca and Fe (means of 15943.81, 12317.46 $\mu\text{g/g}$), 490.23, 206.65 and 6.65 $\mu\text{g/g}$, respectively)

Skeena was the poorest

Control of cellular osmolarity and membrane potential, protein synthesis, transmission of nerve impulses, muscle relaxation, energy production and bone and teeth adsorption.



Vestigial amounts of Na, Pb, Ba, Mo, Co, Cr, Li and Be

RAW 264.7 macrophages

Anti-inflammatory properties

MTT assay was used to establish the concentration range at which cherry extracts did not affect cell viability.

RAW macrophages 264.7 cells were stimulated with LPS.

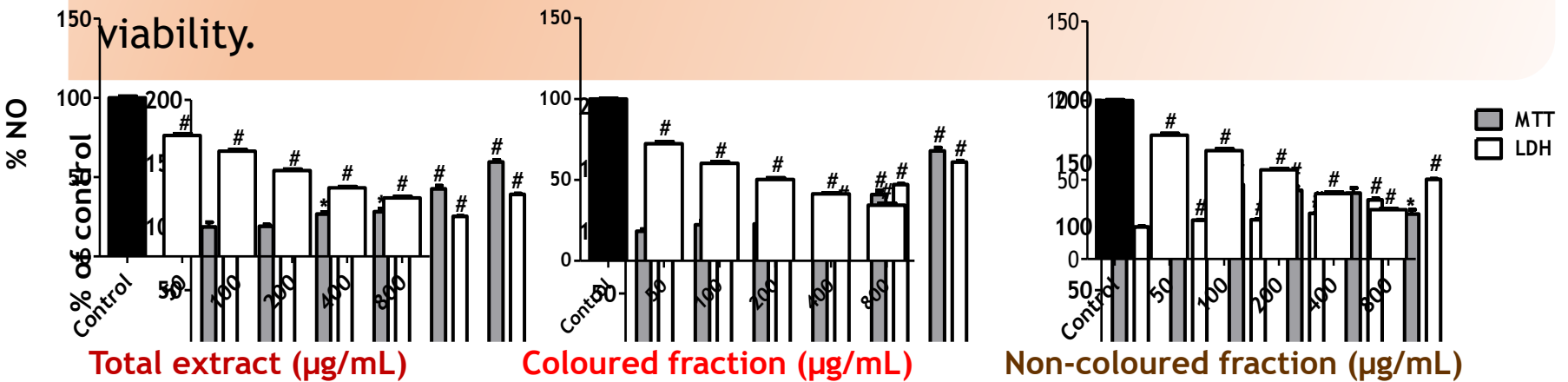


Figure. Effect in nitric oxide (NO) levels of cells pre-treated with cherry extracts (2h), followed by co-treatment (22h) with LPS (1 µg/mL). Values show mean ± SEM of 6 independent assays performed in triplicate (#P < 0.0001 vs. controls).

Figure. Effect of cherry extracts (24h) on MTT reduction and LDH leakage of RAW 264.7 macrophages. Values show mean ± SEM of 6 independent assays performed in triplicate (*P < 0.05, **P < 0.01 and #P < 0.0001 vs. controls).

Cherry extracts have an anti-inflammatory effect, Maybe due to their antioxidant properties

Thank you for your attention!



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