

Supplementary Materials

Phytochemical Analysis, α -Glucosidase and α -Amylase Inhibitory Activities and Acute Toxicity Studies of Extracts from Pomegranate (*Punica granatum*) Bark, a Valuable Agro-Industrial By-Product

Nassima Laaraj ¹, Mohamed Bouhrim ², Loubna Kharchoufa ², Salima Tiji ¹, Hasna Bendaha¹, Mohamed Addi ³, Samantha Drouet ⁴, Christophe Hano ^{4*}, Jose Manuel Lorenzo ^{5,6}, Mohamed Bnouham ² and Mostafa Mimouni ^{1,*}

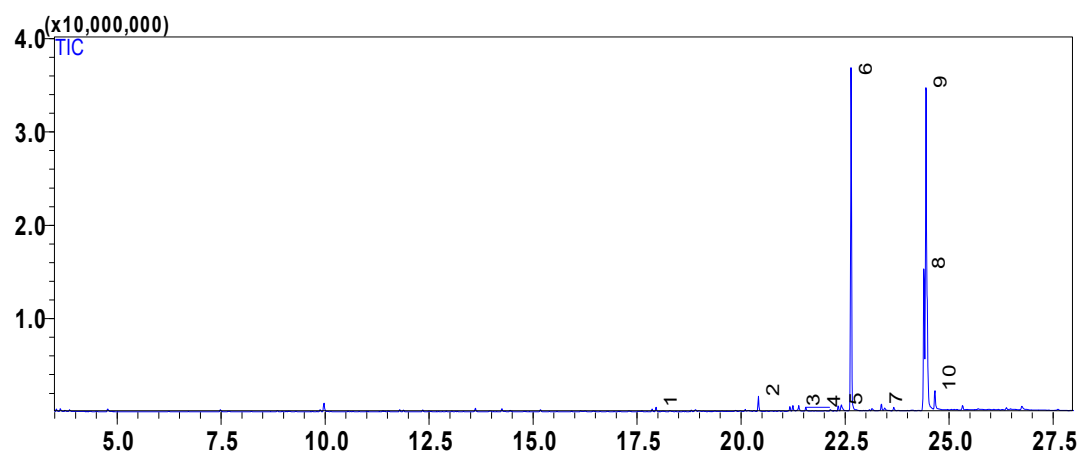


Figure S1: Chromatogram of the defatted hexane fraction (HEE) of pomegranate bark by GC-MS.

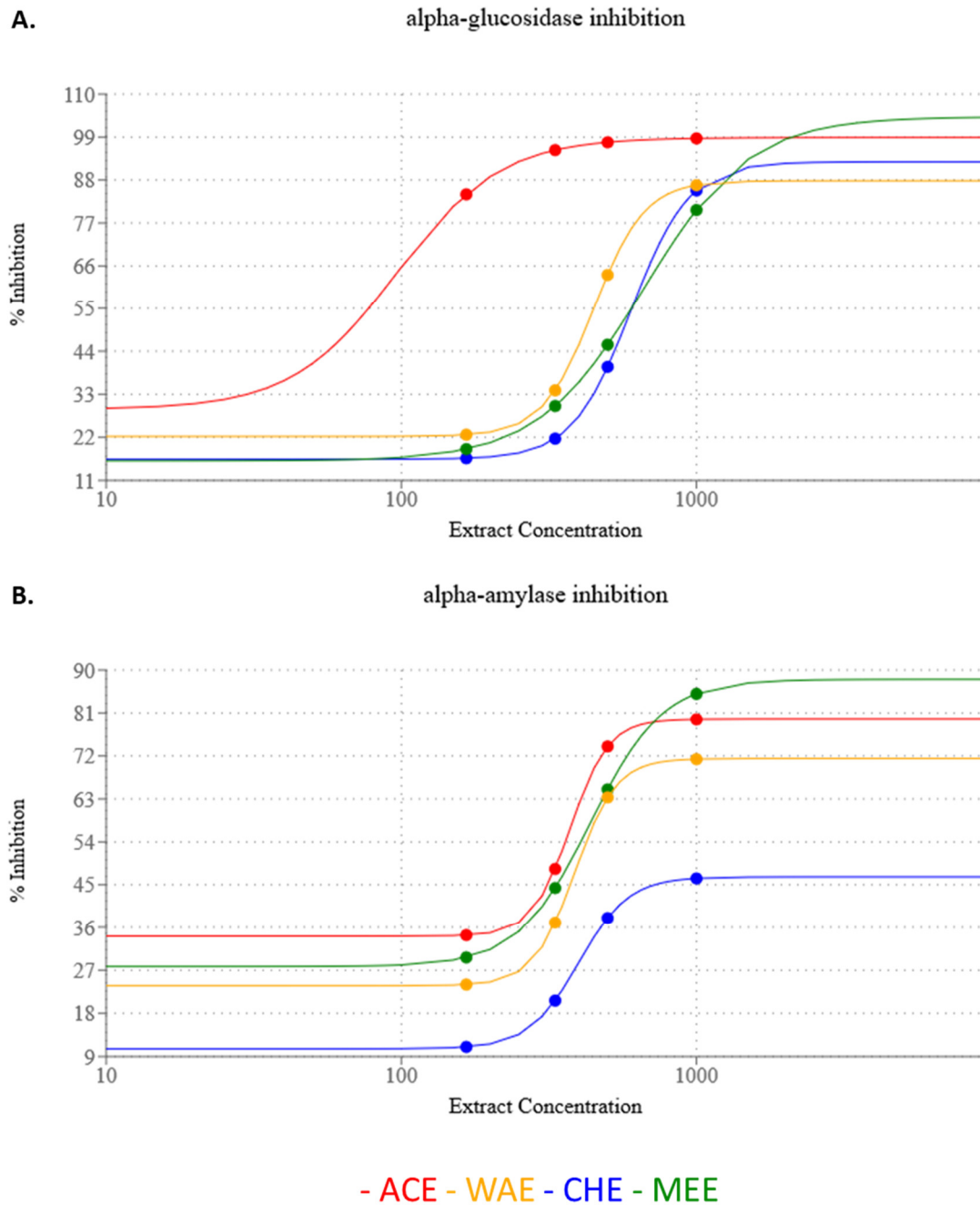


Figure S2: IC₅₀ curves for inhibition of (A) intestinal α -amylase and (B) pancreatic α -amylase by pomegranate (*Punica granatum*) acetone (ACE), water (WAE), chloroform (CHE) and methanol (MEE) bark extracts. Each experiment was done in triplicate.

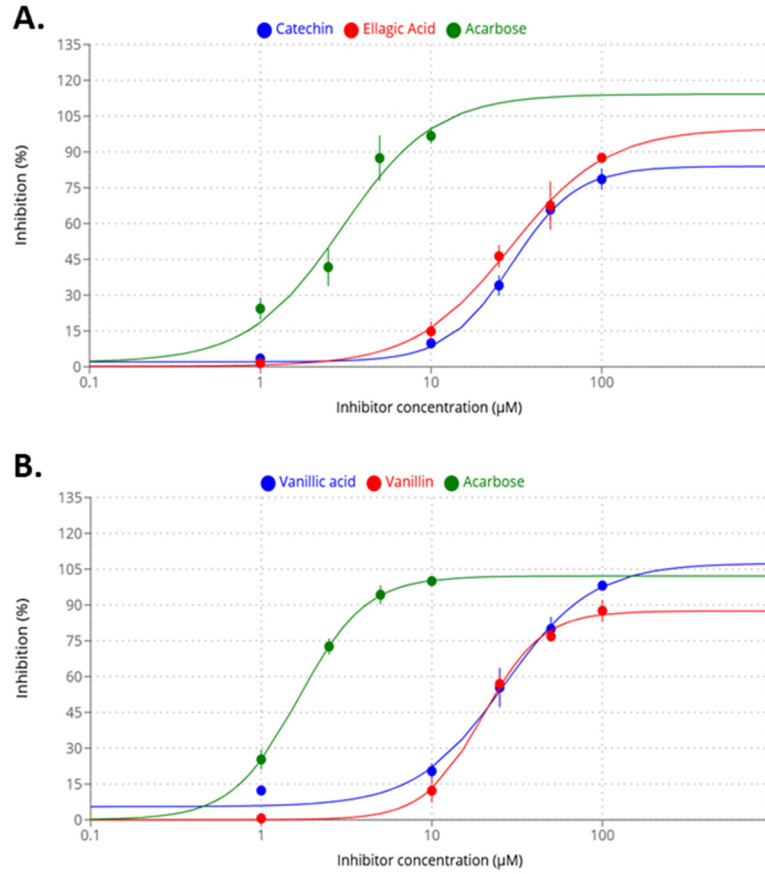


Figure S3: IC_{50} curves (without background correction (subtract smallest response) to show error bars) for inhibition of (A) intestinal α -amylase by acarbose, (-)-catechin and ellagic acid, and of (B) pancreatic α -amylase by acarbose, vanillic acid and vanillin. Each experiment was done in triplicate.

Table S1: Chemical composition percentage (%Area) identified in the defatted hexane fraction (HEE) by GC-MS.

| Pic Number | Name | Retention time (mn) (RT) | %Area |
|---------------|----------------------|-----------------------------|-------|
| 1 | Lauric acid | 17.992 | 0.32 |
| 2 | Myristic acid | 20.542 | 1.40 |
| 3 | Tetracosane | 21.308 | 0.63 |
| 4 | 6-Octadecenoic acid, | 21.467 | 0.79 |
| 5 | 7-Hexadecenoic acid | 22.517 | 1.08 |
| 6 | Palmitic acid, | 24.333 | 31.72 |
| 7 | 10-Methylicosane | 23.417 | 0.67 |
| 8 | Linoleic acid, | 24.417 | 14.37 |
| 9 | Oleic acid | 27.958 | 46.97 |
| 10 | Stearic acid | 24.842 | 2.05 |