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PHENOLICS AND FLAVONOIDS IN HONEY OF DIFFERENT BOTANICAL AND GEOGRAPHICAL ORIGINS FROM CASTILLA LEÓN (SPAIN)



Alevia, M.¹; Sancho, M.T.¹; Osés, S.M.¹; Fernández-Muñoz, M.A.¹

Nutrition and Food Science Division, Department of Biotechnology and Food Science, Universidad de Burgos, Spain



INTRODUCTION

Honeys' composition can strongly vary according to their botanical and geographical origins. Proper characterization of their phenolic compounds including their flavonoids' contents can be used as floral or geographical marker and is also a useful information related with some important biological activities.

OBJETIVE

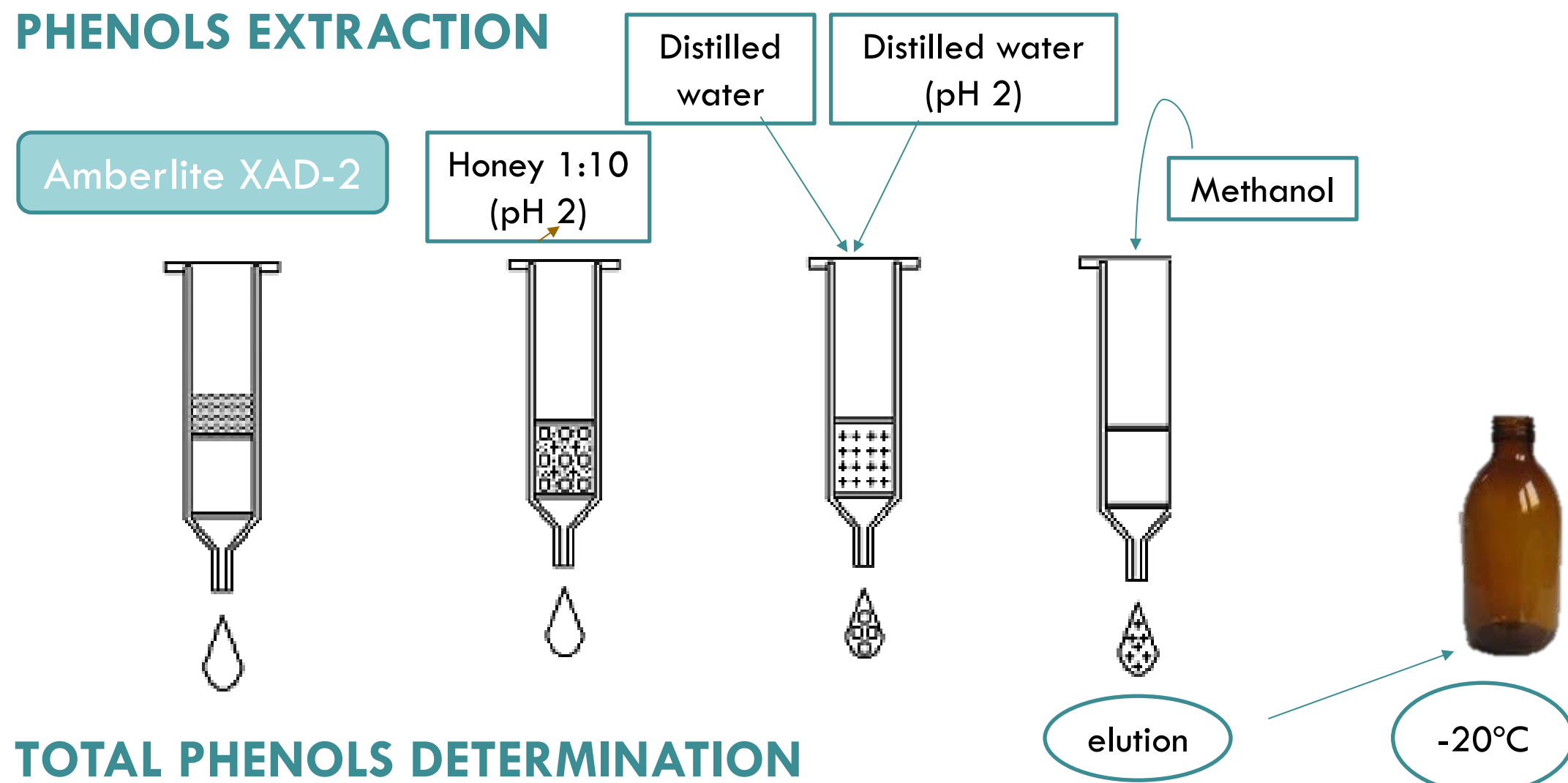
The aim of this study was to evaluate phenolic compounds and several types of flavonoids in 43 samples from different botanical origins harvested in Castilla León region located in the Spanish Northern plateau.

MATERIALS AND METHODS

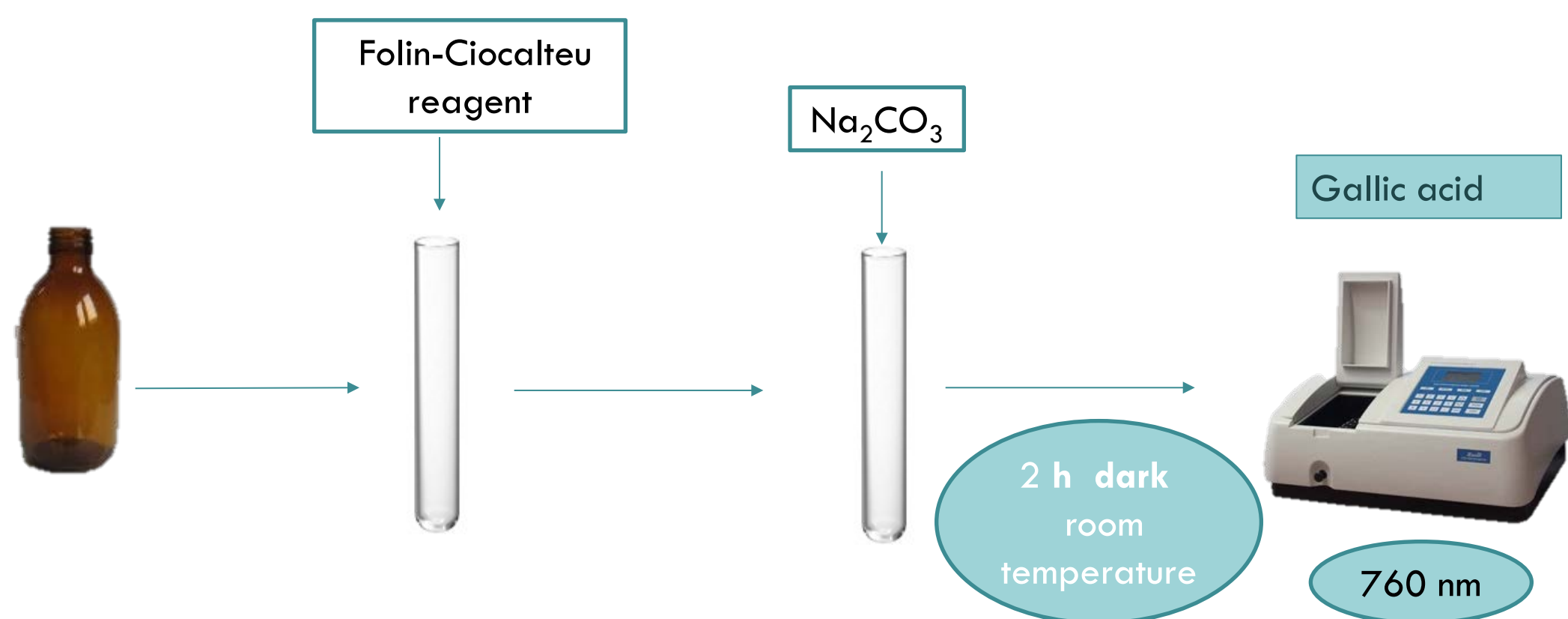


42 samples from
Castilla León (Spain)

PHENOLS EXTRACTION

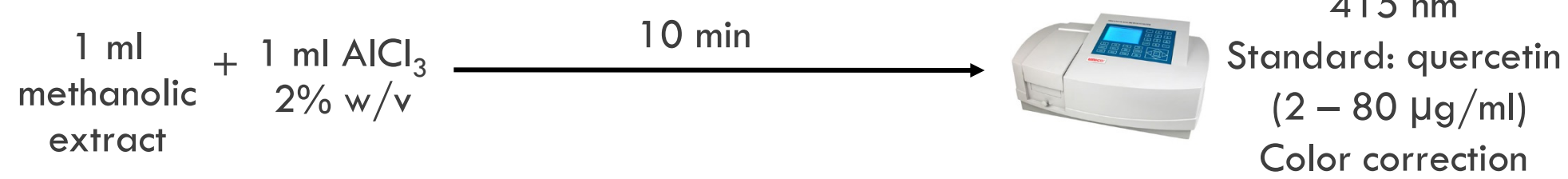


TOTAL PHENOLS DETERMINATION

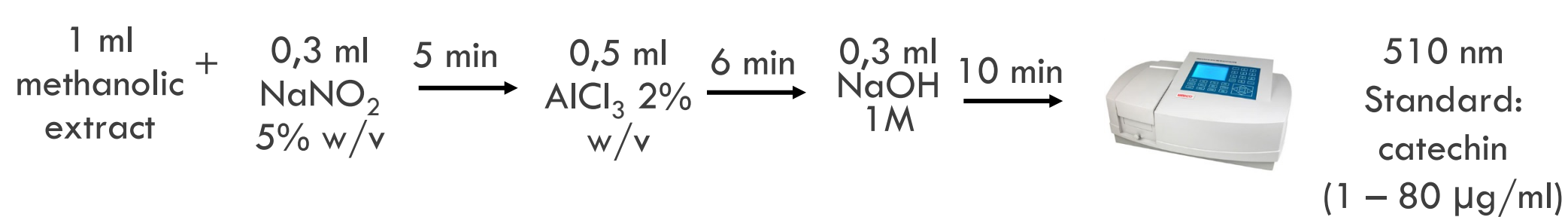


FLAVONOIDS DETERMINATION

In neutral médium (quercetin-type)



In alkaline médium (catechin-type)



RESULTS

Total Phenolics in the studied samples varied from 4.47 to 25.63 mg galic acid /100g of honey (fig. 1). Quercetin-type flavonoids ranged from 0.37 to 2.60 mg quercetin/100g of honey (fig. 2) and catechin-type flavonoids values ranged from 0.65 to 21.35 mg catechin /100 g of honey (fig. 3) with values considerably higher than those of quercetin-type Flavonoids. There were important differences in the phenolic content among the studied samples for total phenolics and quercetin-type flavonoids. For catechin-type flavonoids the differences among samples were even higher.

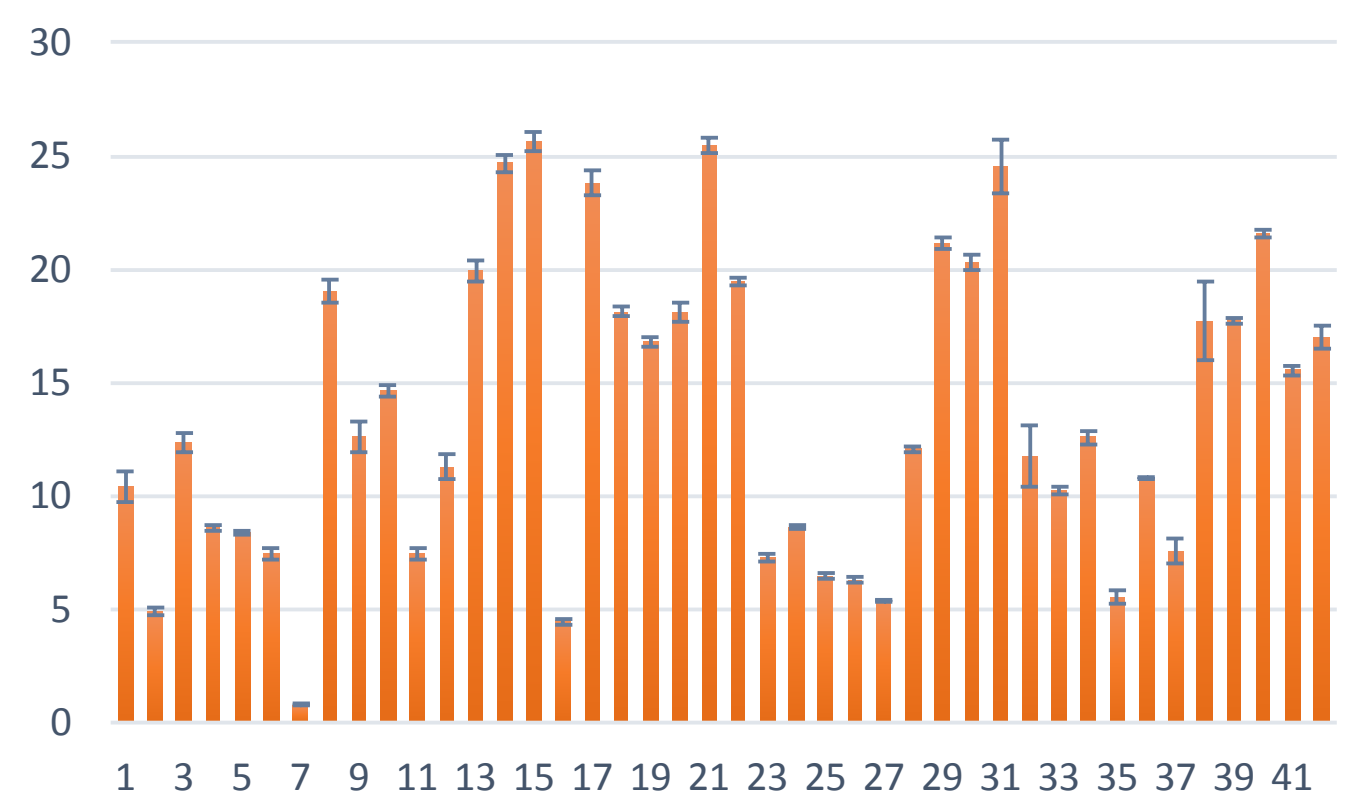


Figure 1. Phenols content (mg GA/100 g) in Spanish Northern plateau

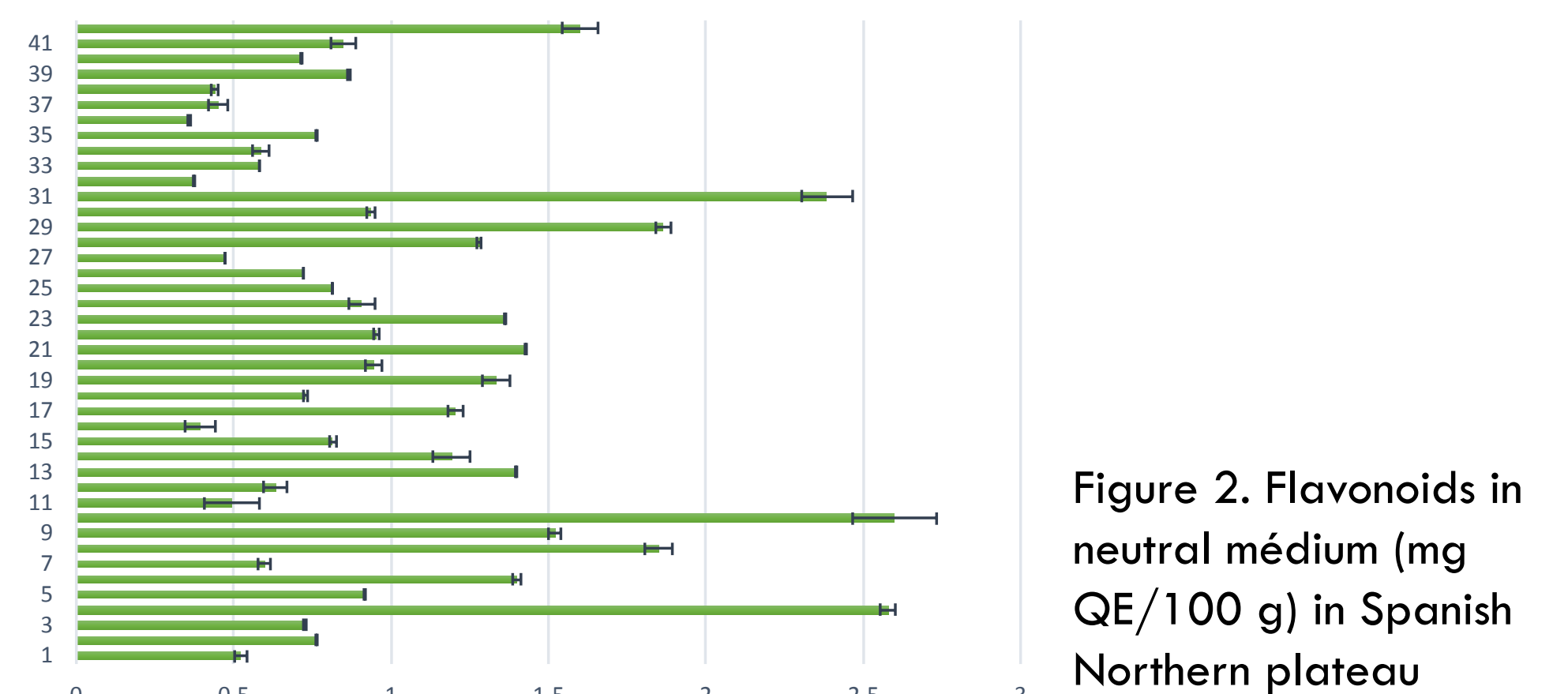


Figure 2. Flavonoids in neutral médium (mg QE/100 g) in Spanish Northern plateau

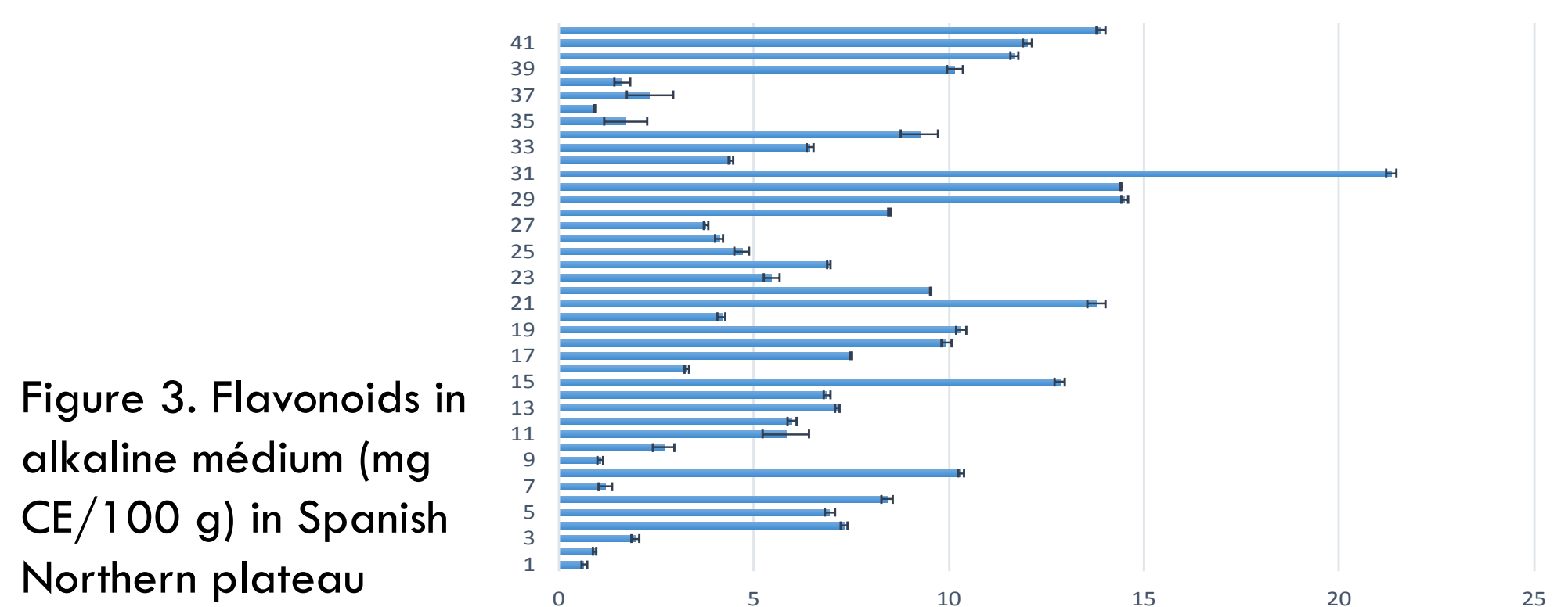


Figure 3. Flavonoids in alkaline médium (mg CE/100 g) in Spanish Northern plateau

CONCLUSIONS

Those results show the high differences in honeys depending on their botanical and geographical origins.

