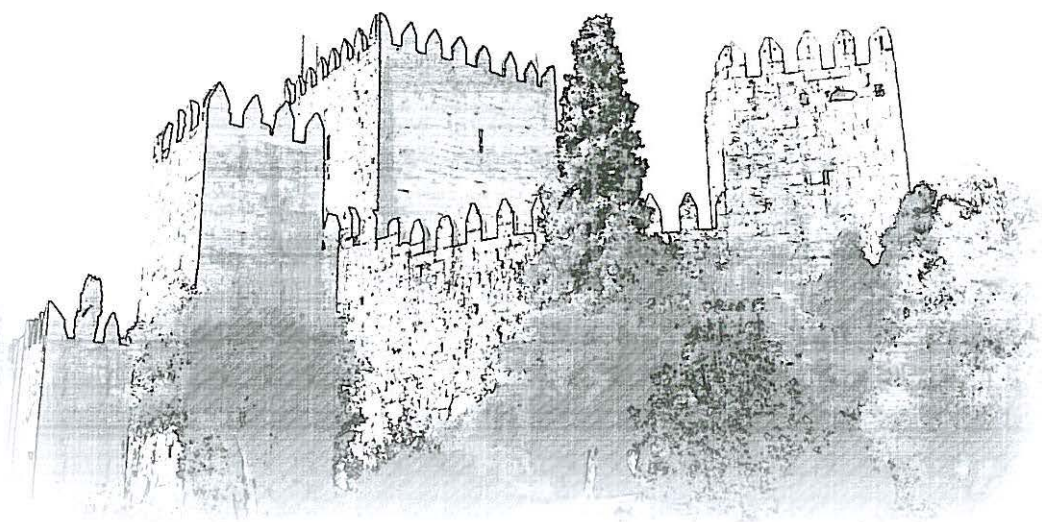


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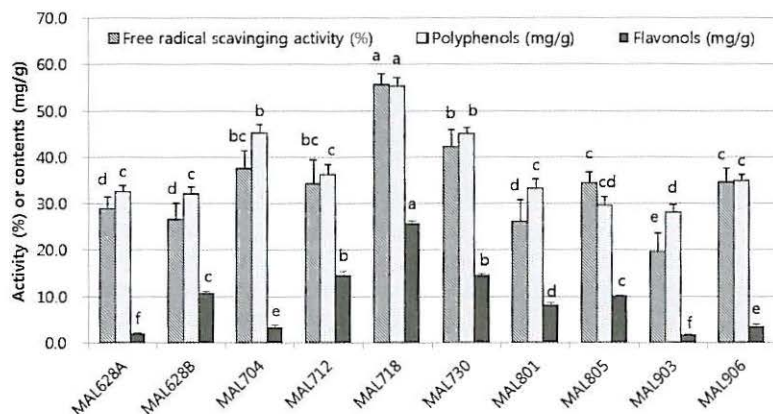


# Book of Abstracts



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**Keywords:** *Morus alba* leaf, *Mori folium*, antioxidant, polyphenol, QC markers

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## P2P27 Phenolic profiling of *Silybum marianum* (L.) Gaertn (milk thistle) by HPLC-DAD-ESI/MS

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Milk thistle (*Silybum marianum* (L.) Gaertn., Asteraceae) is an annual to biennial herbaceous plant native to the Mediterranean basin. The main pharmacologically active constituents of milk thistle fruits are flavonolignans such as silybin A, silybin B, isosilybin A, isosilybin B, silychristin, isosilychristin, and silydianin [2], and they possess antioxidant and hepatoprotective properties [1]. The aim of this study was to compare the phenolic profiles of milk thistle infusion and hydromethanolic extract with the aid of HPLC-DAD-ESI/MS. Similar phenolic profiles were observed for the two preparations, with only quantitative differences between them. The infusion revealed a higher concentration in total phenolic compounds (5.57 mg/g) than the hydromethanolic extract (3.56 mg/g), with apigenin-7-O-glucuronide as the major compound in both preparations (3.14 mg/g in the infusion, and 0.58 mg/g in the hydromethanolic extract). Total flavonoids were higher in the infusion (4.66 mg/g), with apigenin-7-O-glucuronide, luteolin-7-O-glucuronide (1.17 mg/g), and apigenin-O-deoxyhexosyl-glucuronide (0.36 mg/g) as the main constituents. The hydromethanolic extract showed a higher content of total phenolic acids (1.65 mg/g), including 5-O-caffeoylquinic and protocatechuic acids (0.56 and 0.44 mg/g, respectively). Besides these phenolic acids, the hydromethanolic extract also revealed

high levels of luteolin-7-O-glucuronide (0.58 mg/g).

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**Keywords:** Phenolic composition, milk thistle, HPLC-DAD-ESI/MS

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1. Pereira, C. et al. (2013) Ind. Crop. Prod. 49:61-65.
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## P2P28 Chlorogenic acid content in *Calendula* varieties through cut dates in Mexico

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*Colegio de Postgraduados*

*Calendula officinalis* L. is a valuable plant for the medicinal uses of their capitulum (flowers). In this species has been demonstrated genetic diversity in the chemical composition of the capitulum. The flowers contain several phenolic compounds of nutraceutical value e.g. chlorogenic acid. This is an important intermediate in lignin biosynthesis. It is also an antioxidant and can contribute to treatment of atherosclerosis and ischemic perfusion illnesses. It is also an inhibitor of tumour promoting activity and decreases the cholesterol level in the blood of alcoholics by stimulation of secretion of bile acids. In this plant has not been studied the variation of the content of chlorogenic acid in connection with the varietal diversity and the continuous harvestings, because they are managed periodically through all the growth cycle. The aim of the study was to determine the concentration of chlorogenic acid in floral capitulum of six varieties of *Calendula* harvested through eight weekly cuts. HPLC was used as analytical tool to determine the concentration of this compound. The chromatographic method allowed to distinguish and quantify chlorogenic acid and it was found statistical differences among cut dates and varieties in the concentration of this compound. The variety V6 was the highest in the concentration of chlorogenic acid whereas V5 was the lowest. The concentration of this compound varied from 1.43 to 89.05 mg/kg dry weight. However the varieties V7 and V8 were higher in total flavonoids. These values are higher than those reported by others coworkers in different medicinal plants. From an agronomic point of view these data are important to suggest the best variety of *Calendula* floral capitulum related with chlorogenic acid content.

**Keywords:** *Calendula*, chlorogenic acid, liquid chromatography

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