### Interaction Between Chañar Brea Gum and Prosopis Flexuosa Gum

### Alba Benuzzi(1), Franco Tonelli(2), Martin Masuelli(3)

(1) Área de Química Física, Departamento de Química, Facultad de Química, Bioquímica y Farmacia, Universidad Nacional de San Luis, Argentina.

(2) FICES-Universidad Nacional de San Luis, San Luis, Argentina.

(3) Instituto de Física Aplicada (INFAP-CONICET-UNSL)- Área de Química Física, Departamento de Química, Facultad de Química, Bioquímica y Farmacia, Universidad Nacional de San Luis, Ejercito de los Andes 950-San Luis, Argentina.

E-mail: masuelli@unsl.edu.ar

RESUMEN

Prosopis flexuosa gum (GPF) is an exudate from the homonymous tree extracted in spring 2023, its color is transparent (white). Chañar brea gum (GCB) [1] is also an exudate from the Parkinsonia praecox tree extracted in January 2023, it is caramel-colored and both gums are soluble in water. This study consists of evaluating the interaction of both gums and their consequent synergy by intrinsic viscosity measurements. The determination consists of setting the GPF concentration at 0.3% by weight and varying the GCB between 0.2 and 1% by weight. The results show a marked synergy where the GCB causes an increase in the intrinsic viscosity of the GPF from 0.2121 to 0.32 dL/g in the diluted zone with a less marked interaction, while in the more concentrated zone it remains constant around 0.23 dL/g with a greater interaction due to the presence of a greater amount of molecules of both gums forming hydrogen bonds.

**References**

1. “Physicochemical Parameters for Brea Gum Exudate from Cercidium praecox Tree”. Martin A. Masuelli, Aníbal Slatvustky, Ariel Ochoa, M. Alejandra Bertuzzi. Colloids Interfaces 2018, 2, 72; doi:10.3390/colloids2040072.