# ORGANIC PRODUCTS EXTRACTION OF THE MEXICAN SEMIDESERT PLANTS

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**Introduction.**
The Chihuahua Desert ecosystem is of great importance by their characteristics and diversity species. In the Coahuila state presents a variety of physiographic, climatic and soil factors that have led to a significant diversity of vegetation types and flora. The study of biological activity of some compounds found in plants, offers an opportunity to discover new and effective bioactives for pest control, plants have developed defense mechanisms to protect.

Obtaining materials from Mexican semidesert species for the organic industry

**Methods.**
Plants samples will be collected in different Coahuila semidesert areas: Candelilla (*Euphorbia antisyphilitica*), oregano (*Lippia graveolens*), hojasén (*Flourensia cernua*), Sangre de Drago (*Jatropha dioica*), mesquite (*Prosopis* spp.), nopal (*Opuntia ficus indica*). Plants were dried and ground. Will determine the extraction solvent saturation with a colorimeter to standardize extraction time. To obtaining extracts and oils, two solvents were used ethanol and water with different concentrations, was measured extraction efficiency, pH, density, °Bx and absorbance and transmittance of the oils and extracts. We compared the antioxidant activity of the different materials by DPPH and ABTS technique. For candelilla wax extraction organic acids were used, was measured wax extraction efficiency. For extraction of nopal mucilage, water was used as solvent, for precipitating the nopal mucilage was used a solvent mixture, was measured mucilage extraction efficiency.

**Results.**
Established the extraction time for the extracts obtained from each plants. Wi found that extracts antioxidant activity is associated with physicochemical parameters measured. With antioxidant activity results, method proportions were defined; the time extraction, solvent and plant material proportion. In all cases the absolute oil extracted with ethanol had the highest antioxidant activity. Candelilla wax extracted presented appropriate quality parameters **Fig.1**. The efficiency of extraction was 5.3% .

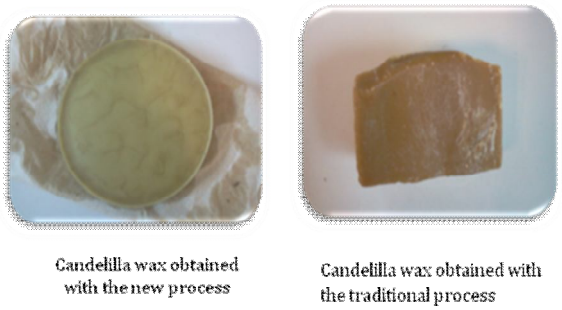


**Fig.1** Candelilla wax obtained with the new and traditional process.

Were defined nopal mucilage parameter extraction. The extraction efficiency was 2.3%. Extracts, mucilage's and waxes were stored for application in organic products.

**Conclusions.** With this work were defined extraction parameters of different materials.

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