Method of production of bio-plastic derived from citrus pectin and reinforced with nanoparticles

Renewable energies

Description
It is a method of making a biodegradable plastic (bio-plastic) reinforced with nanoclays and nanosílicas. The advantages of bio-plastics is that they are renewable, sustainable, carbon-neutral (they do not generate CO_2), biodegradable and compostable. This bio-plastic is environmentally friendly because of its short time of degradation and the use of citrus peel instead of petroleum. Moreover the bio-plastic is water soluble, strong and capable of forming transparent or opaque films.

Application
Production of packages, bags, sacks, light padding and fibers, among others.

Stage of Development
The biodegradable plastic (bio-plastic) reinforced with nanoclays and nanosílicas has been tested at the laboratory level.

IP Status
Patent application No. MX/a/2012/012702

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Market potential

It is expected that in coming years the global biopolymers market continues to grow, primarily in Europe and the United States. The main application of biopolymers is packaging, with a share of about 57% of total demand (2012).

Transferring conditions

- ✓ Technological development agreement (optional)
- ✓ Licensing (includes upfront payment and royalties)

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