

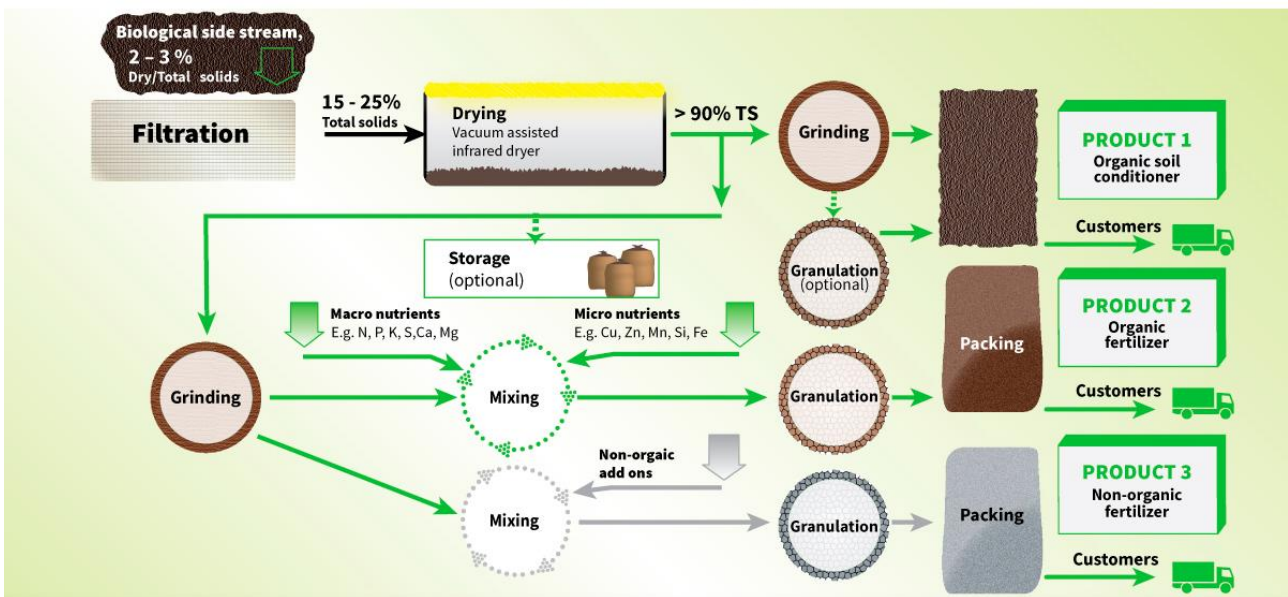


Elinkeino-, liikenne- ja ympäristökeskus



Nanopar has developed a novel method for drying of organic municipal and industrial sludges.

**Paskier® Process
Fertilizer production process**



The Paskier® Process is based on to a vacuum assisted medium wave infrared technology and will dry organic sludges with the economy and efficiency not known before.

The technology is patented.

Dried sludge can be used as a soil improver or a base ingredient for fertilizers.

The average water evaporation rate/power consumed for organic sludges is 2 l of H₂O / 1 kWh of energy and the residence time under infrared is 10 – 12 min. The sludge is dried to contain more than 90 % DS (Dry Solids) and being organic it is excellent soil improver or the dried sludge can be used as a base ingredient for producing custom made design fertilizers by adding micro and macro nutrients as per the customer, soil and crop specific requirements.

Organic sludges, recycled to fertilizers, offer sustainable solution and in pricing are competitive with commercial fertilizers which are made from non-renewable natural resources. The sludge transport costs and emissions are reduced by 80% when the recycled fertilizers are produced on the water treatment plant.

Current status: The pilot plant is operational (80 – 120 kg feed/hour at average of 20 % DS in the feed). Golf green autumn fertilizers are on field testing phase. LUKE (Natural Resources Institute of Finland) pot tests demonstrate similar yield with commercial fertilizers. Testing of the crop fertilizers begins on spring 2019. First full scale piloting on a Finnish waste treatment plant is confirmed to commence mid-2019.

The Paskier® Process is up-scalable to any required production capacity and in most of the cases can be installed on to 2 x 40 ft sea containers.



The fertilizers have Finnish Food Authority approval.



RUOKAVIRASTO
Livsmedelsverket • Finnish Food Authority