

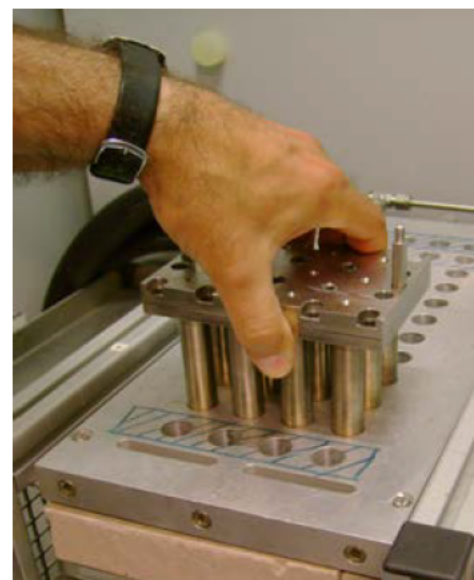
# Amazon – Monomers

*Cesar Muñoz de Diego*

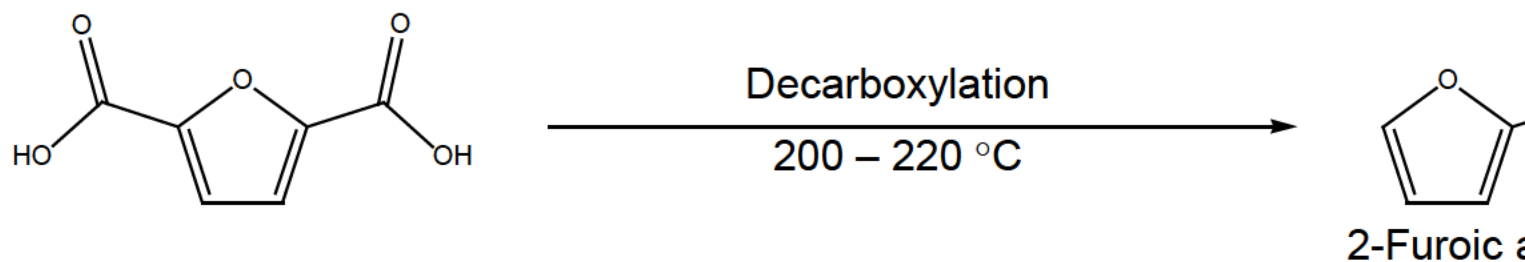
*Andre van de Beek*

## Experimental approach

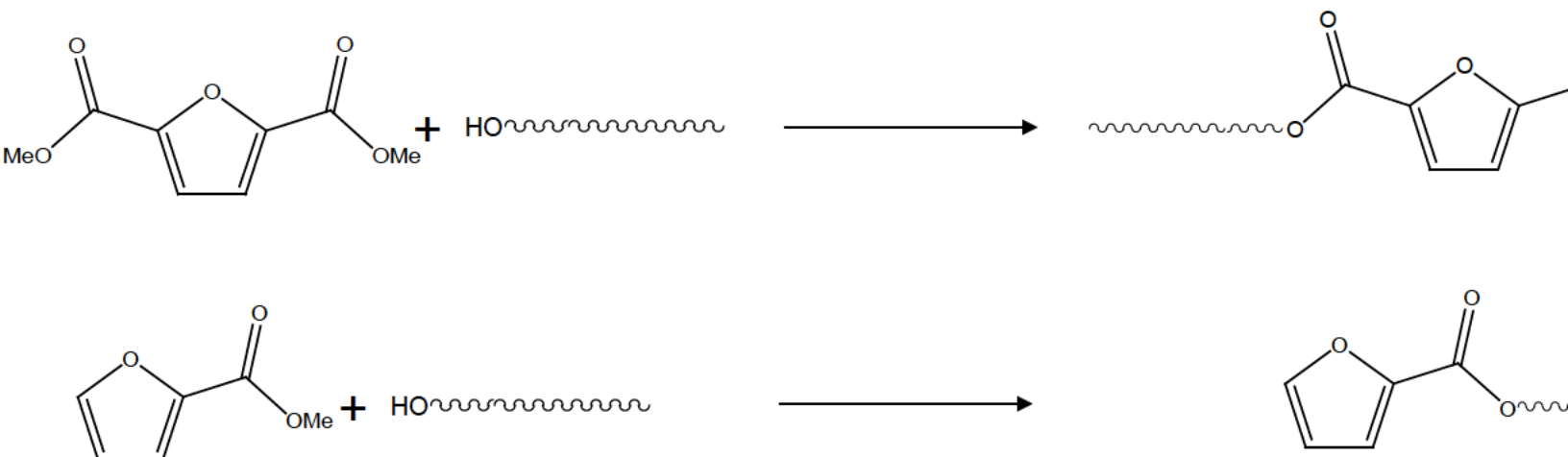
- Batch reactions (HTHPQCS).
- Air was used as source of O<sub>2</sub>
- Source of metals:
  - Co:  $\text{Co}(\text{AcO})_2 \cdot 4\text{H}_2\text{O}$
  - Mn:  $\text{Mn}(\text{AcO})_2 \cdot 4\text{H}_2\text{O}$
  - Br: NaBr
- Acetic acid was used as solvent.
- The samples were analyzed by HPLC



## Results: Effect of the temperature

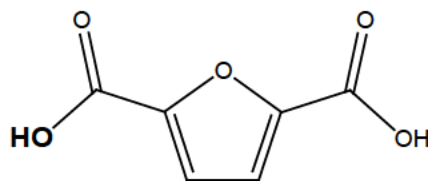
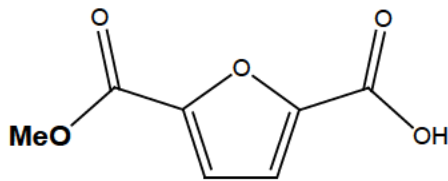


2-Furoic acid will act as end-capper in the polycondensation lowering final molecular weight



# Results:

## Stability of products.



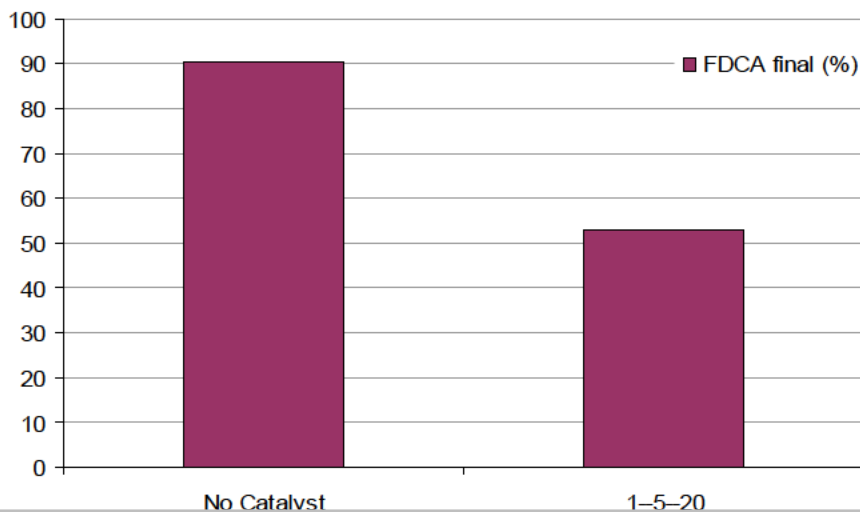
Co/Mn/Br

T= 220 °C

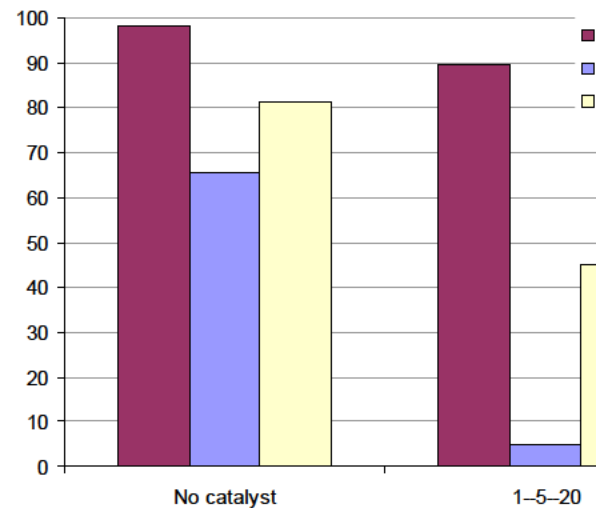
P= 60 bar

Cat loading= 0.78 %

### Pure FDCA

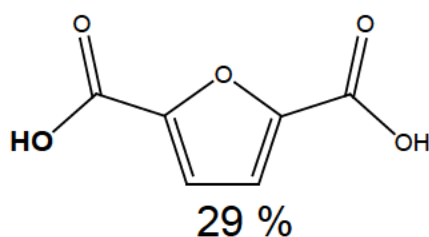
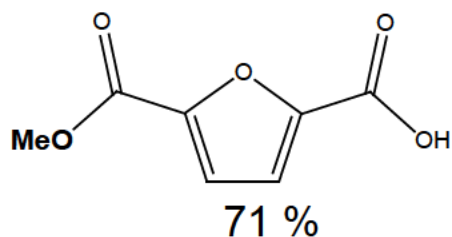


### Mixture FDCA / FDCA1/2



# Results:

## Stability of products. 160 °C and 60 & 20 bar.



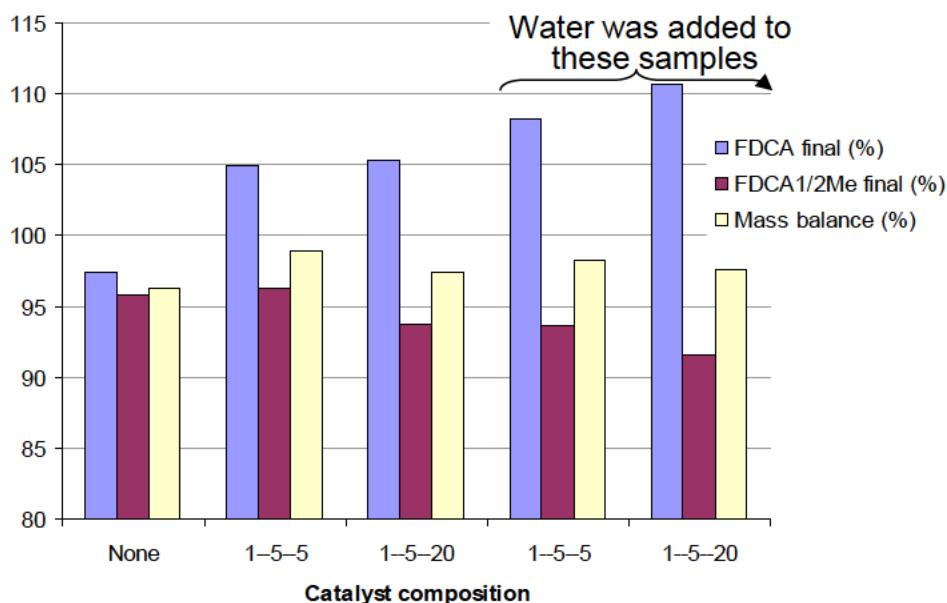
Co/Mn/Br

AcOH

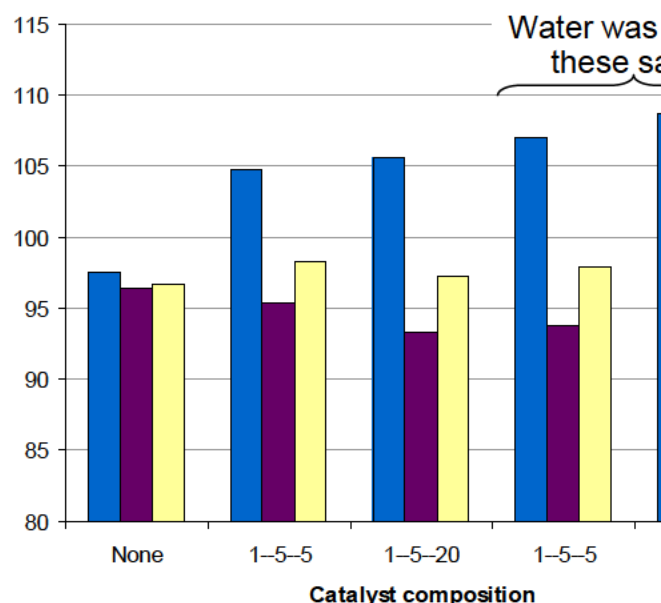
T=160 °C

Cat loading= 0.78 %

### Pressure: 20 bar.



### Pressure: 60 bar.



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