



# DTU Building 228

700 m<sup>2</sup> pilot plants, laboratories and workshop



These pilot plants are used for teaching and research.

As stand-alone units they are applied in our ordinary courses in process technology/unit operations lab.

Many units in combination are applied in the advanced course in process technology – for instance to simulate an entire industrial production process.

A number of mobile units are also available for special applications.



# Flow phenomena

Liquid mixing  
and aeration of  
vessels



Pump  
systems



Gas flow in pipes

Liquid flow in pipes



# Column operations



Continuous distillation  
in bubble-cap tray column



Absorption of ammonia in  
packed column



Batch distillation  
of alcohols  
using structured  
packing





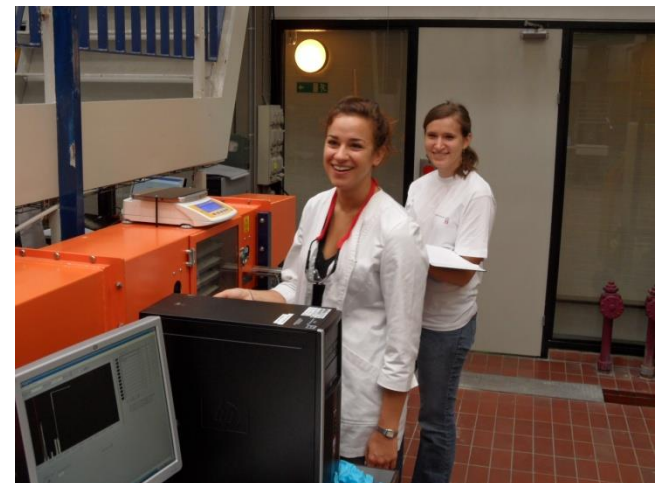
# Drying processes



Fluidization and fluid bed drying



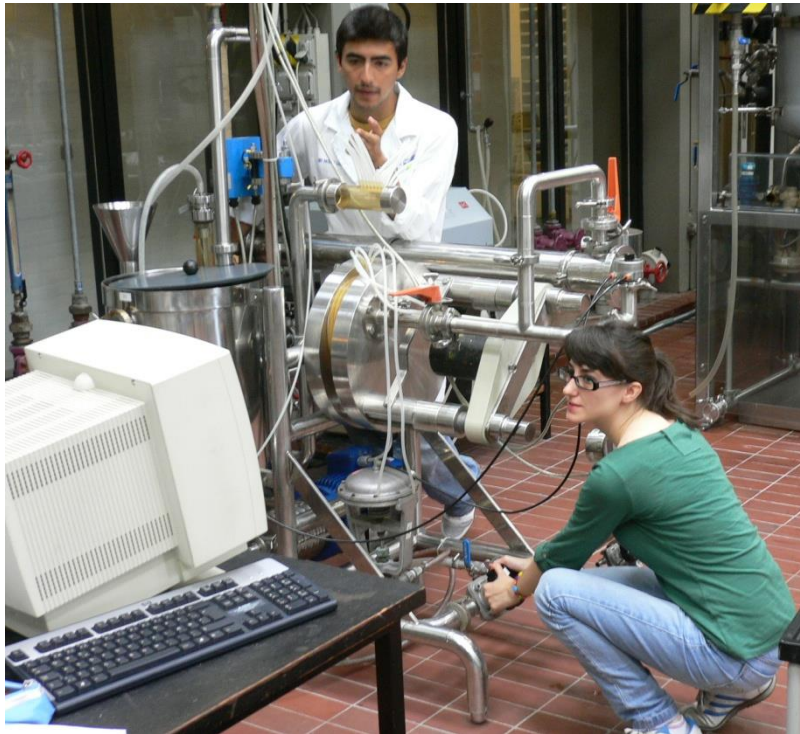
Spray drying



Drying on trays  
in a tunnel

# Separation processes, 1

Disk-stack centrifugation



Ultrafiltration

Filtration in  
a filterpress





# Separation processes 2

Vacuum crystallisation

Ammonia  
tray stripper



Evaporation in falling film evaporator



# Reactions



Fixed bed for immobilized enzyme processes, ion exchange or chromatographic separations



Multipurpose plant for organic synthesis

Bubble column for gas/liquid reactions, aeration etc.

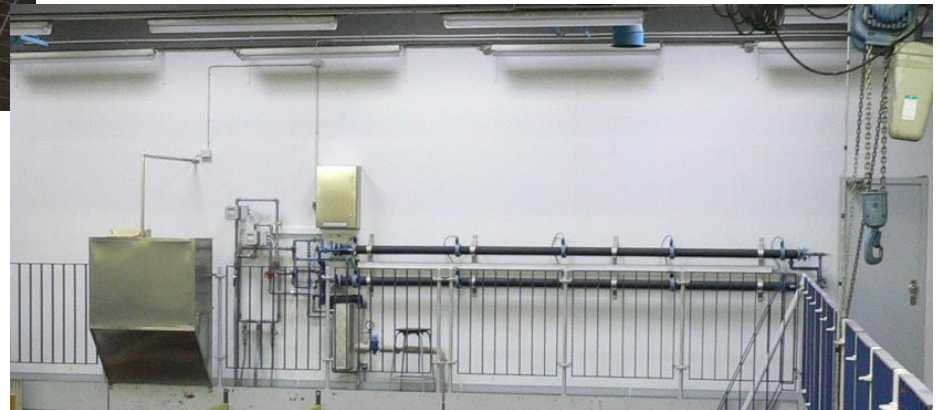
# Other operations 1



Liquid/liquid extraction



Solid/liquid extraction



Heat transfer in pipes and plate heat exchangers



## Other operations 2



Hydro  
cyclones



Mobile  
CIP unit



Various  
férmenters



High  
temperature  
plant