

## **Supplementary Data**

### **Evaluation of pharmaceutical compatibility between Acarbose and common excipients used in the development of controlled release formulations**

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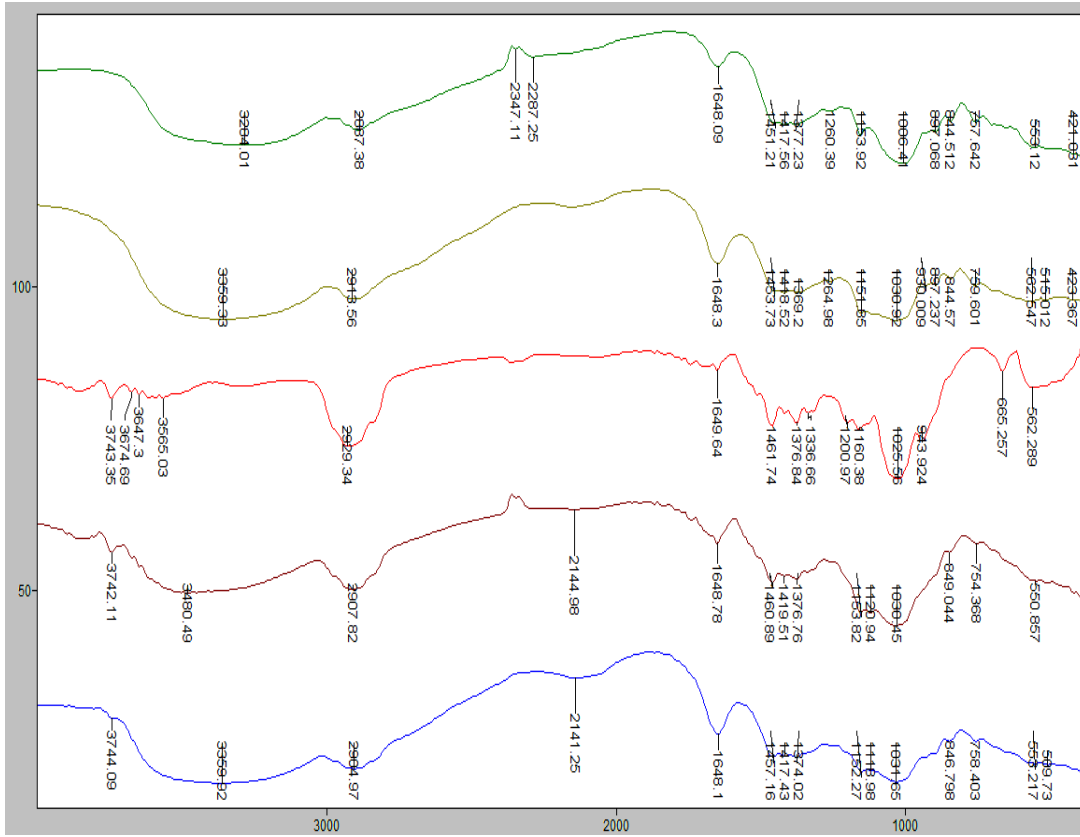
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<sup>2</sup>Department of Pharmaceutical and Food Control, Faculty of Pharmacy, Tabriz University of Medical Sciences, Tabriz, Iran

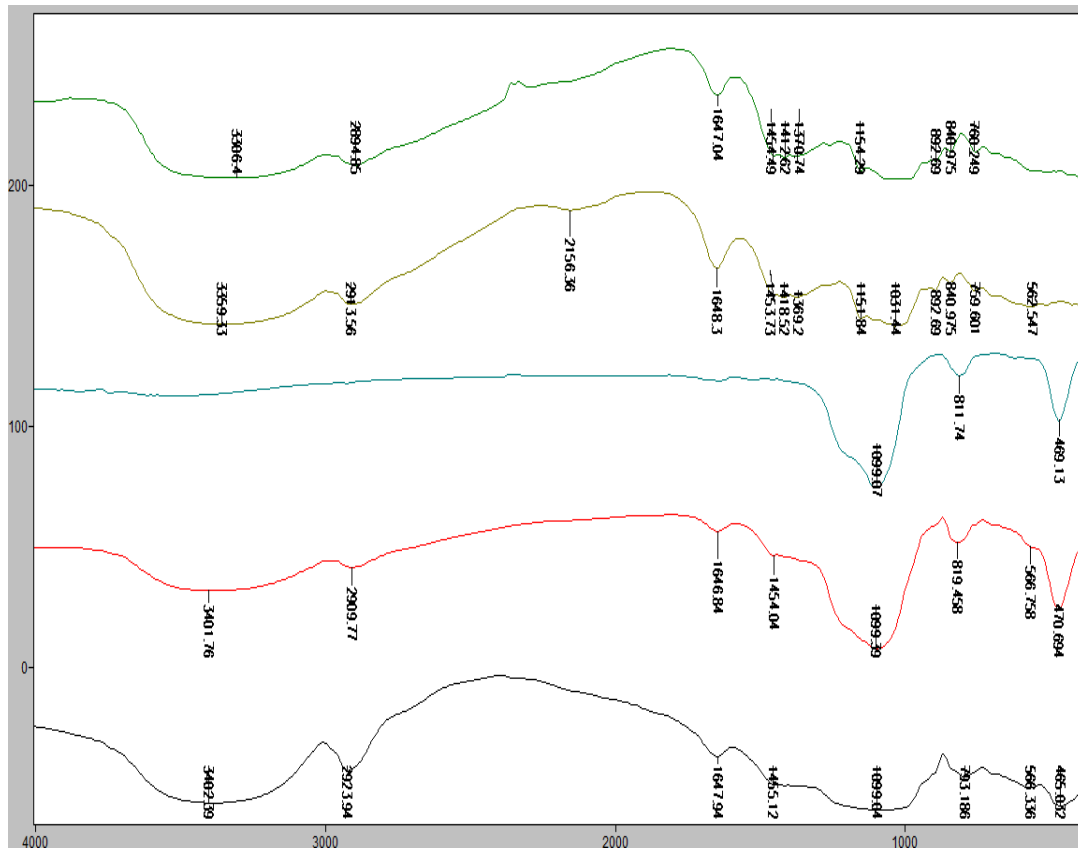
<sup>3</sup>Food and Drug Safety Research Center, Tabriz University of Medical sciences, Tabriz, Iran

# FTIR results for samples

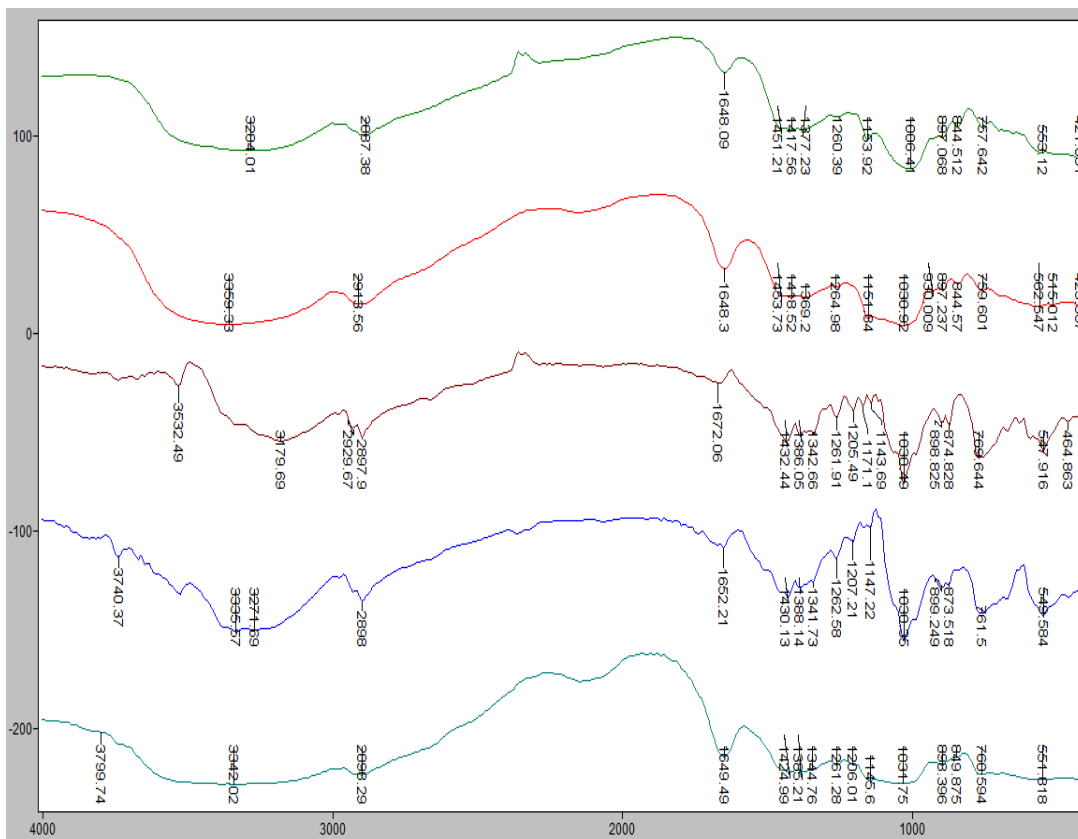
## Compatible excipients



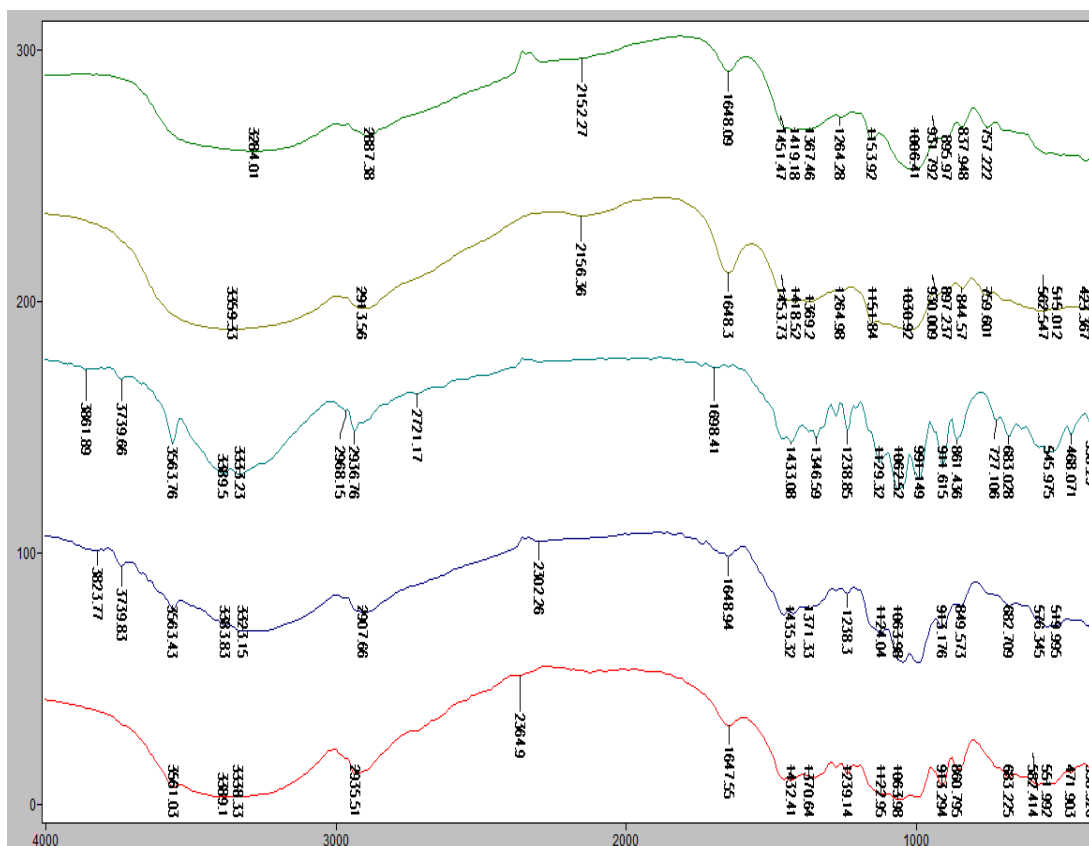
From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, HPMC, Binary mixture immediately, and after 2 months incubation



From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Aerosil, Binary mixture immediately, and after 2 months incubation

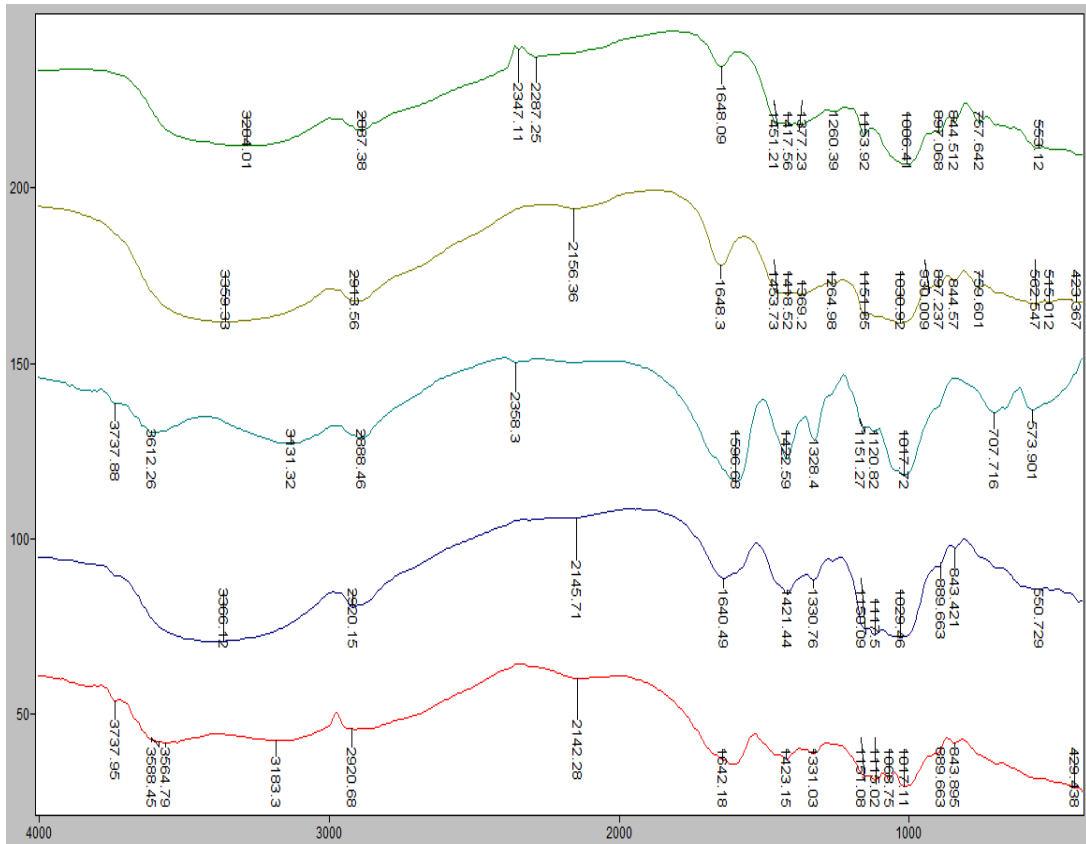


From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Lactose, Binary mixture immediately, and after 2 months incubation

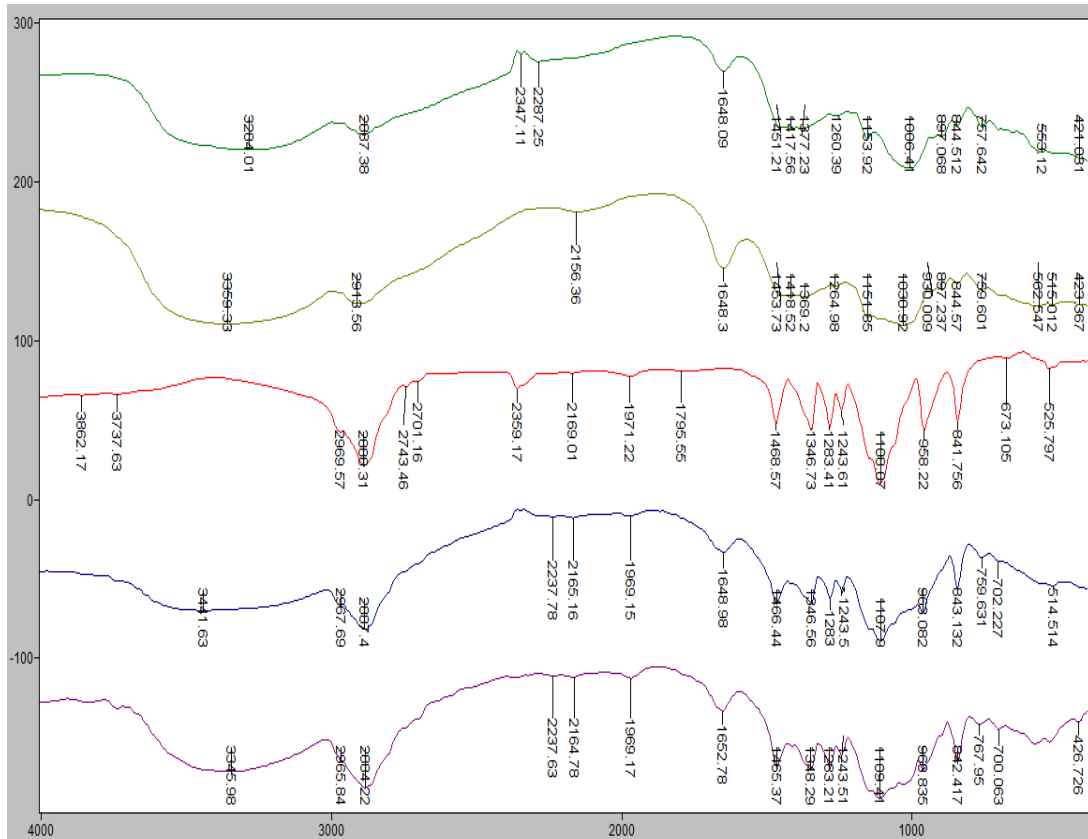


From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Sucrose, Binary mixture immediately, and after 2 months incubation



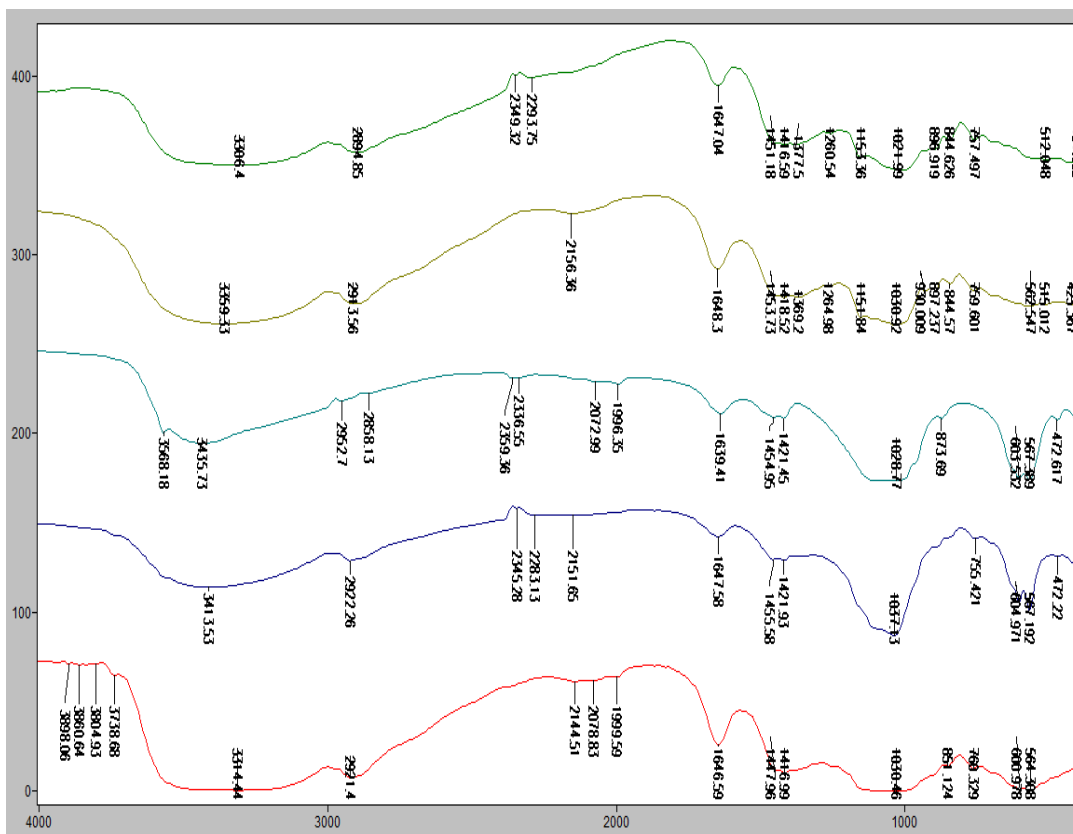


From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Na CMC, Binary mixture immediately, and after 2 months incubation



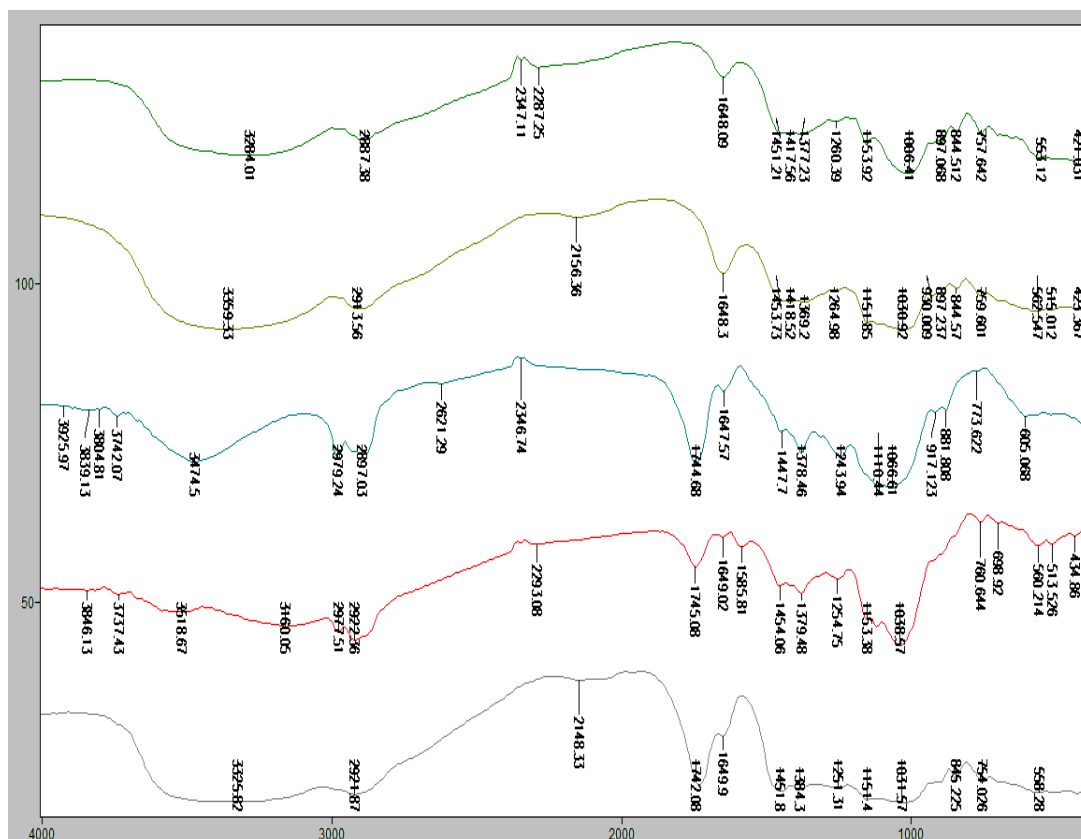
From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Poloxamer, Binary mixture immediately, and after 2 months incubation



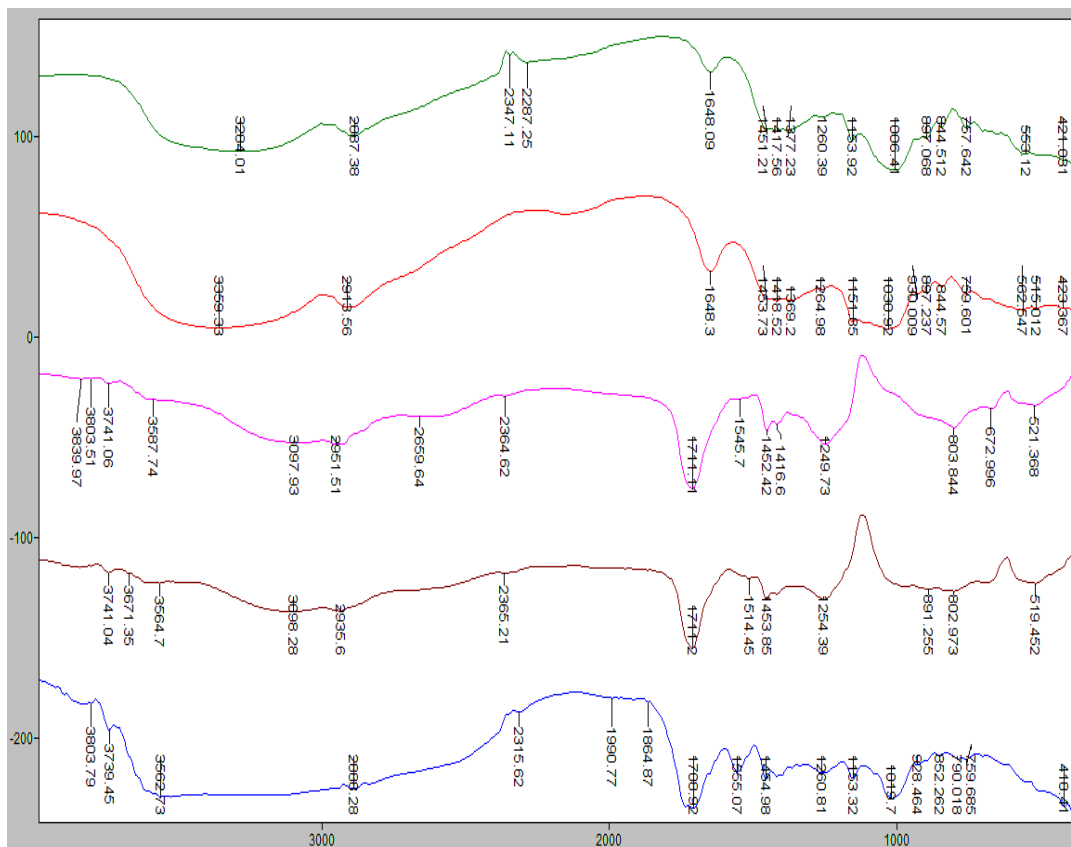


From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, DCP, Binary mixture immediately, and after 2 months incubation

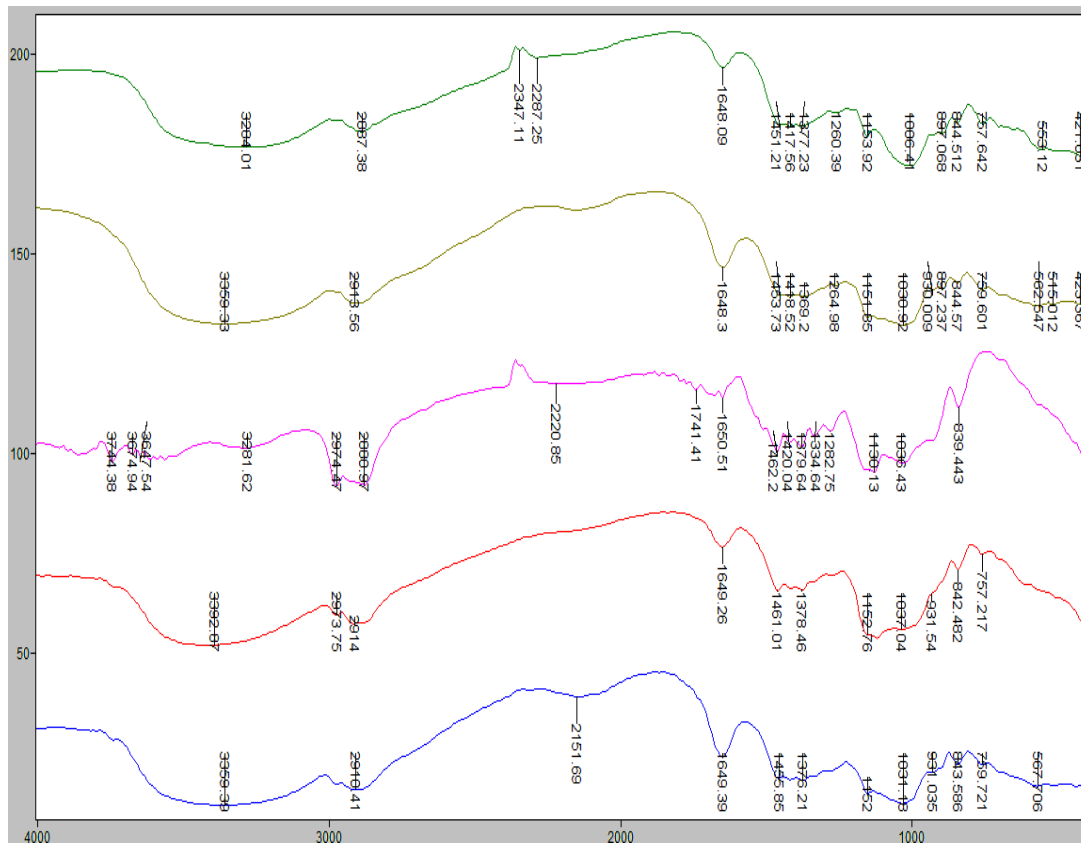
# Incompatible samples



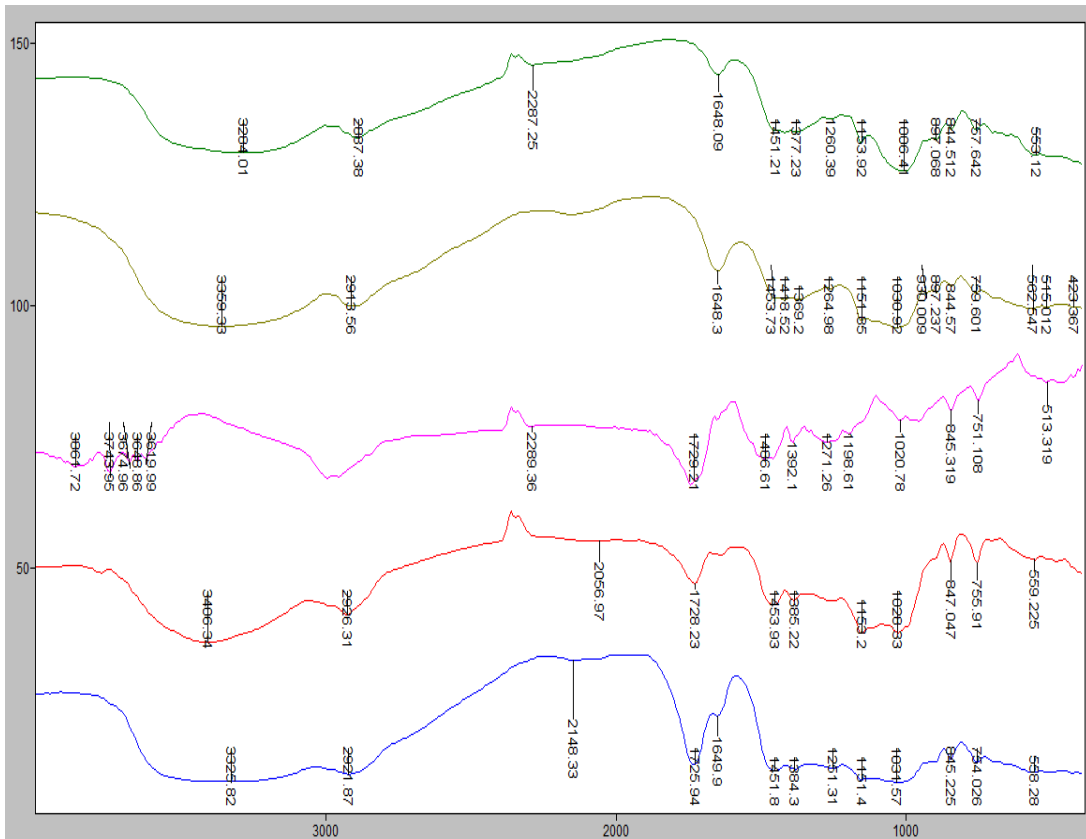
From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, EC, Binary mixture immediately, and after 2 months incubation



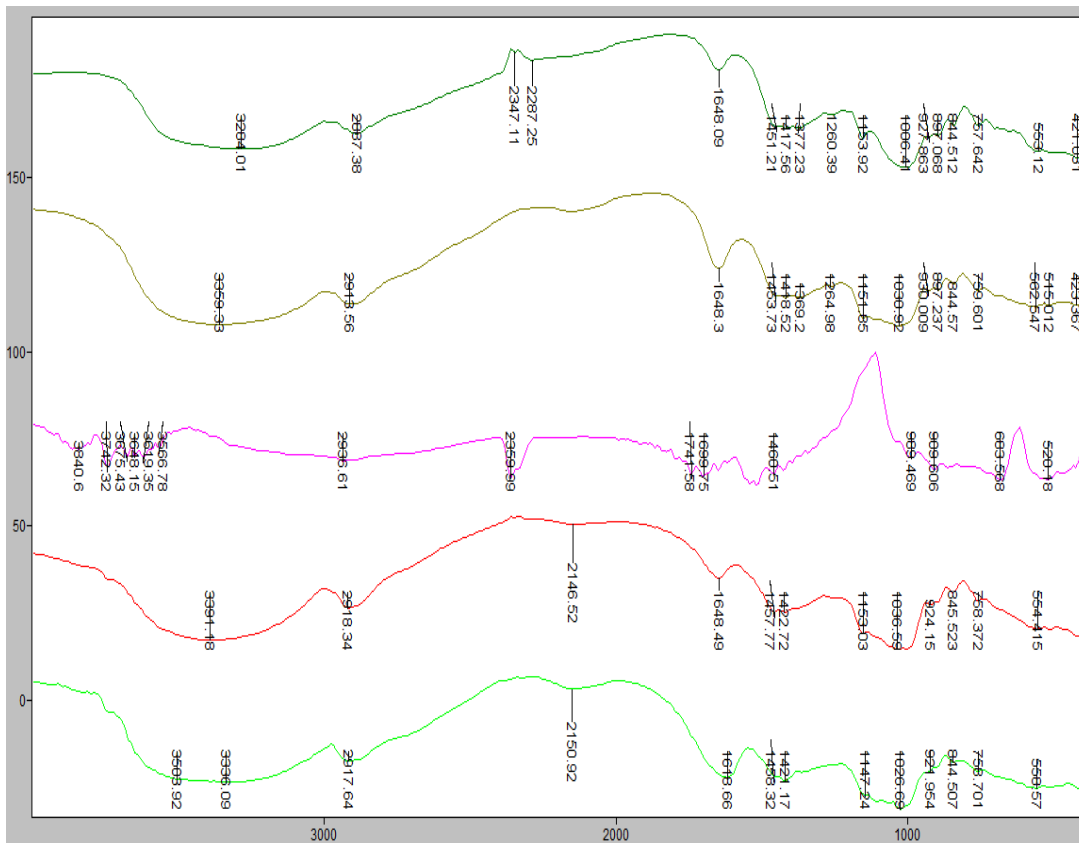
From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Carbopol, Binary mixture immediately, and after 2 months incubation



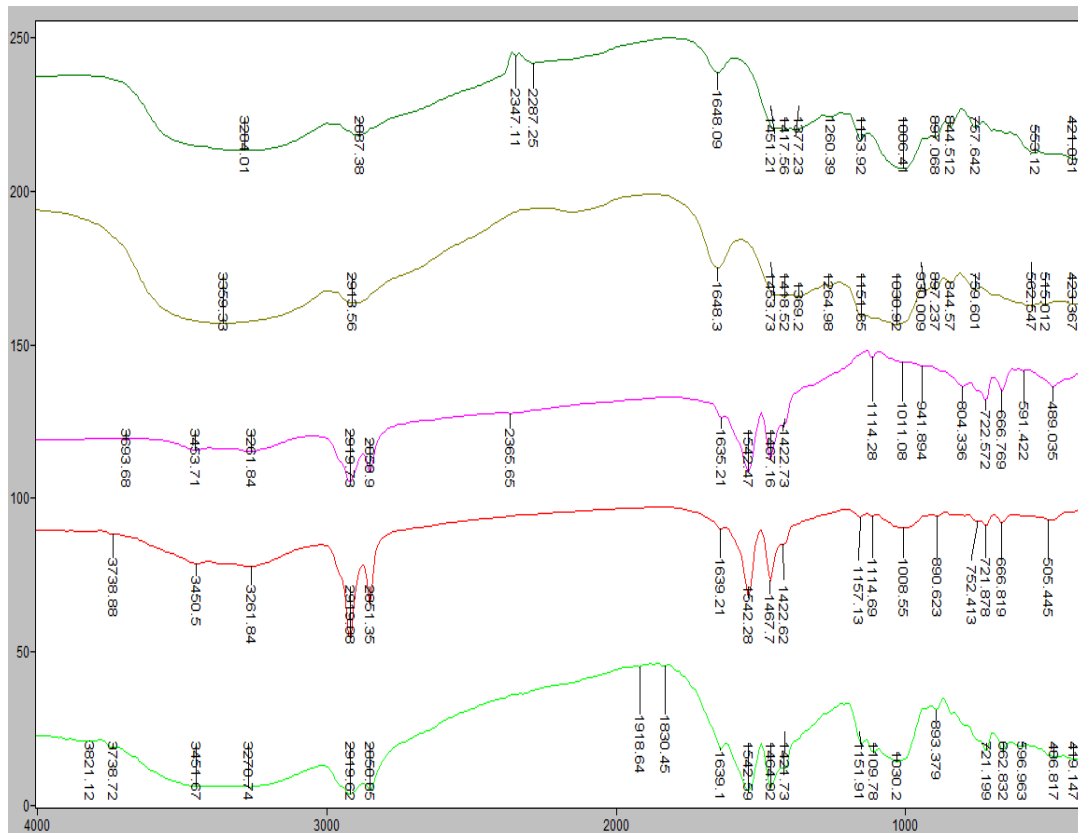
From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, HPC, Binary mixture immediately, and after 2 months incubation



From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Eudragite, Binary mixture immediately, and after 2 months incubation



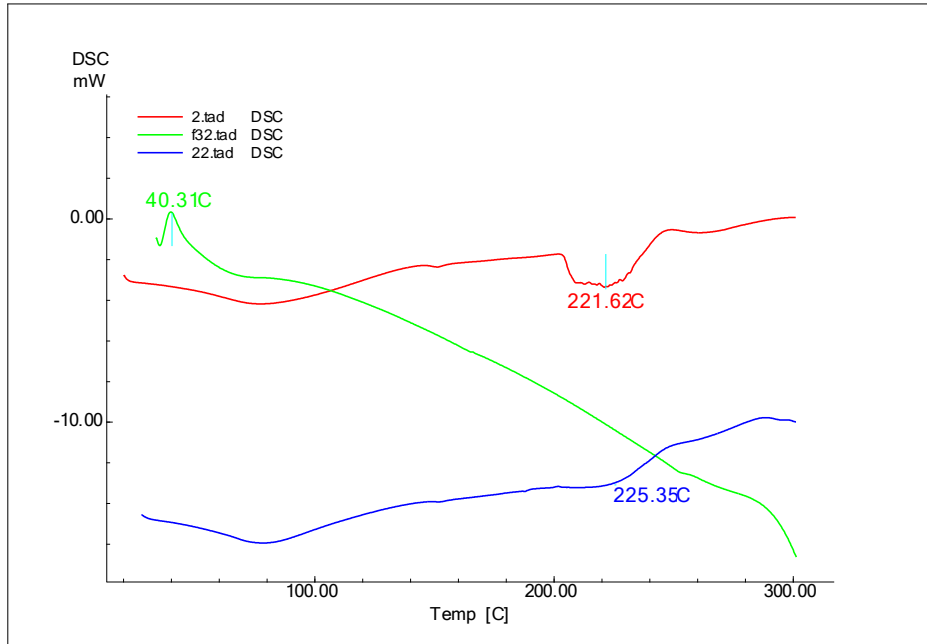
From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Na Alginate, Binary mixture immediately, and after 2 months incubation



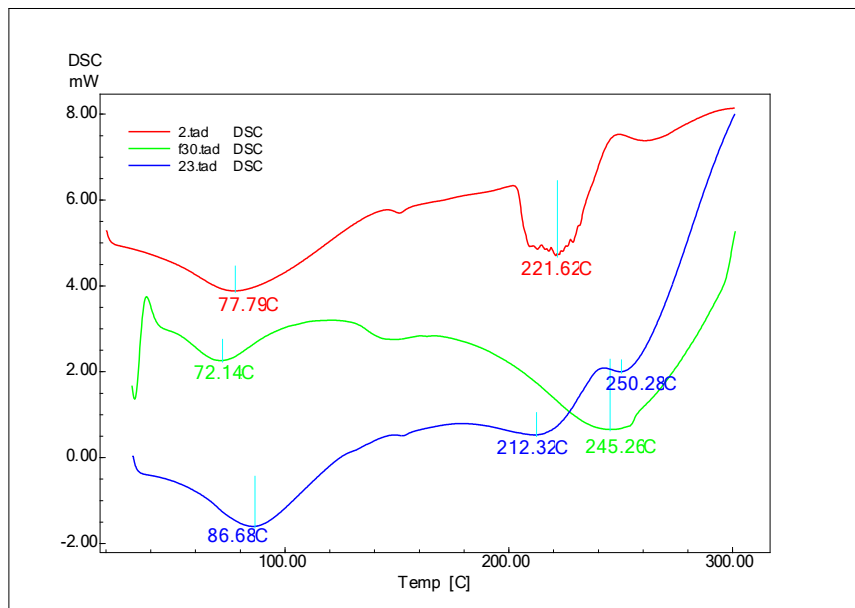
From TOP (green): FTIR spectra of Acarbose, Acarbose after 2 months, Mg stearate, Binary mixture immediately, and after 2 months incubation

# DSC results

## Compatible samples

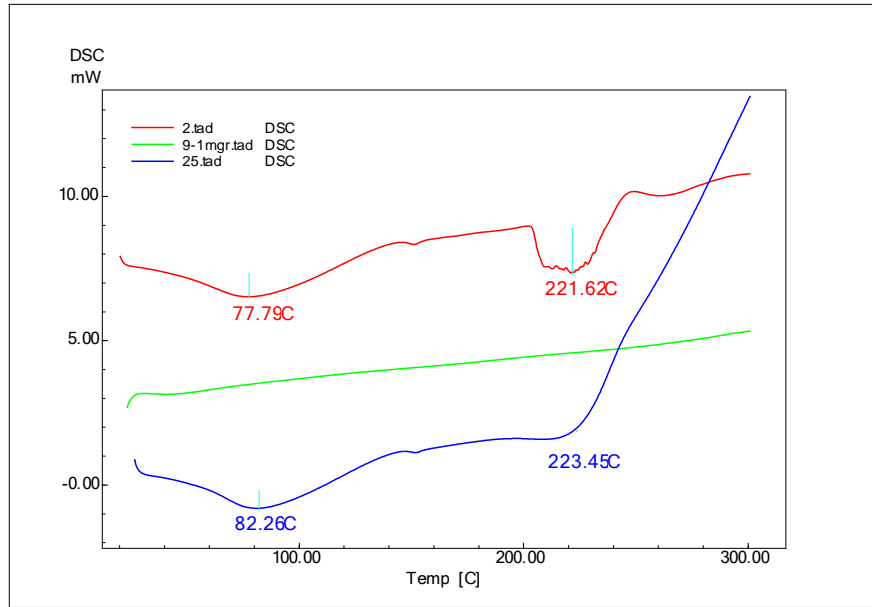


Acarbose (2), HPMC (f32), Binary Mixture (22)

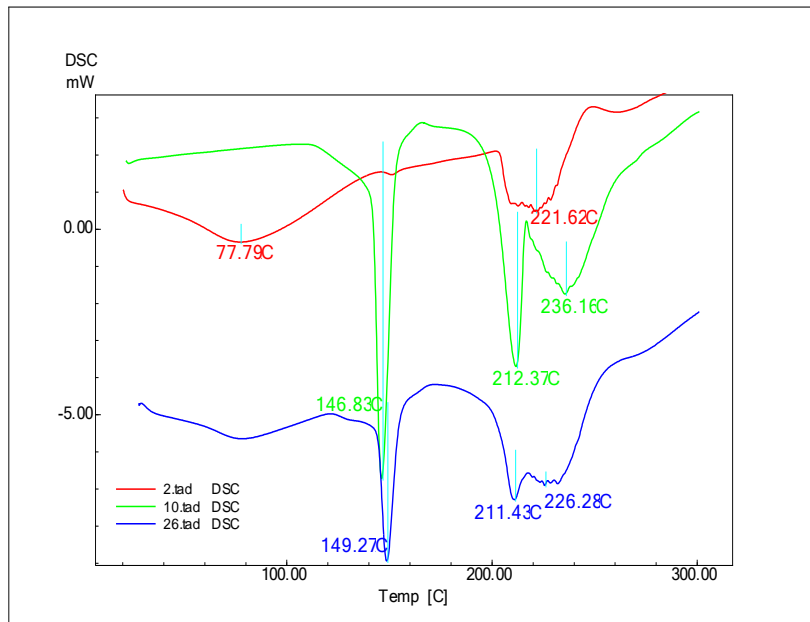


Acarbose (2), carbopol (f30), Binary Mixture (23)

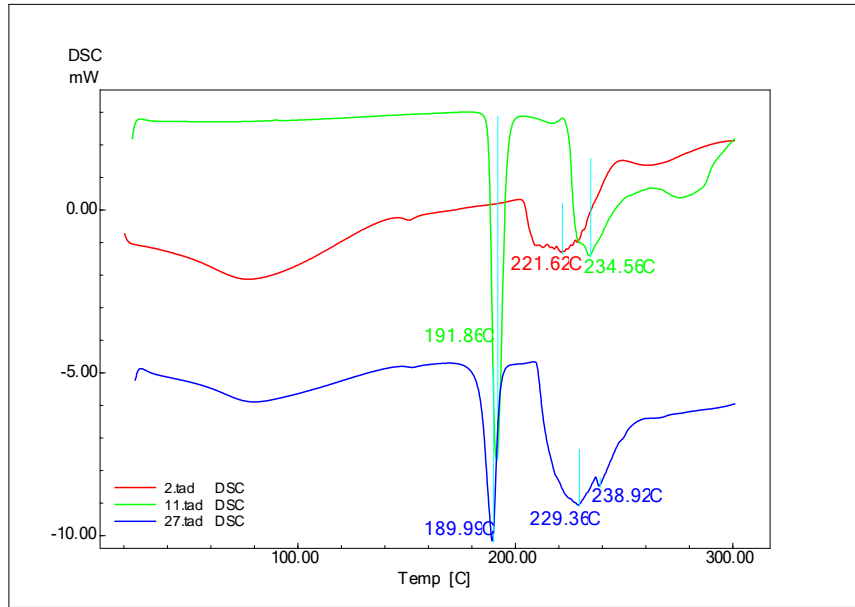




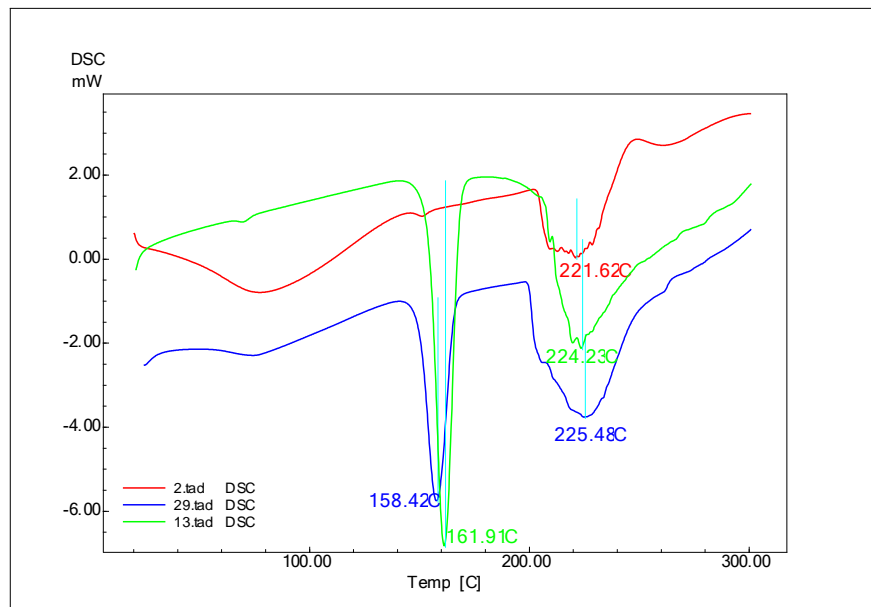
Acarbose (2), Aerosil (9-1mgr), Binary Mixture (25)



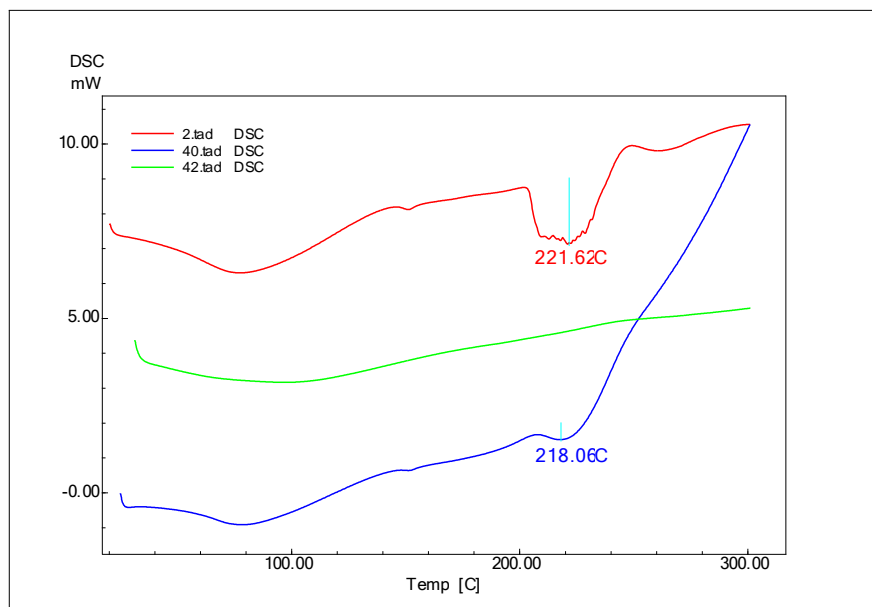
Acarbose (2), Lactose (10), Binary Mixture (26)



Acarbose (2), Sucrose (11), Binary Mixture (27)

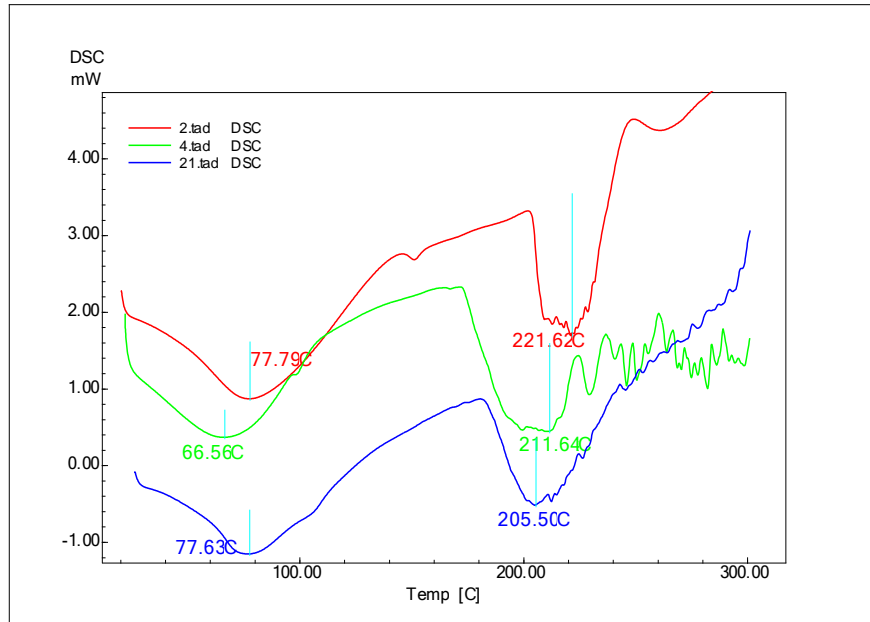


Acarbose (2), Dextrose (13), Binary Mixture (29)

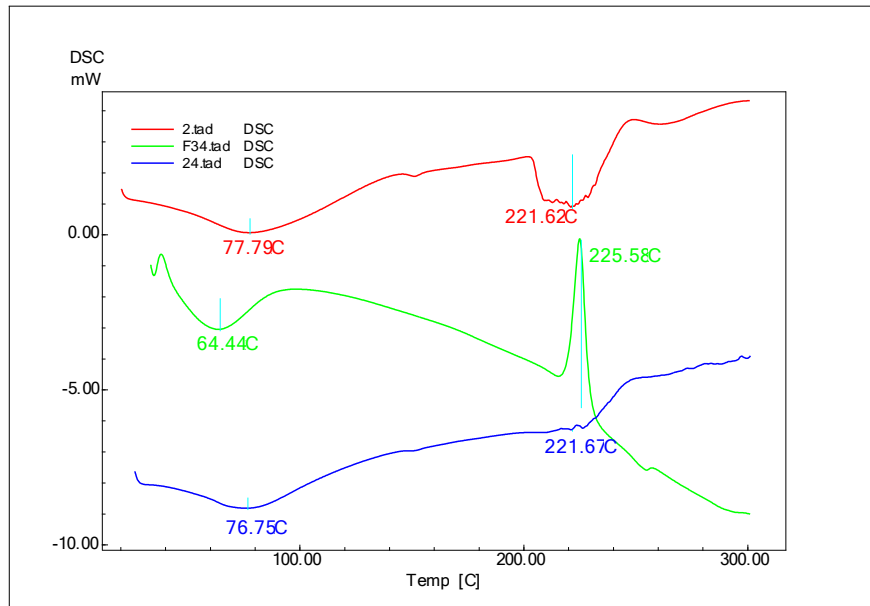


Acarbose (2), Dicalcium Phosphate (42), Binary Mixture (40)

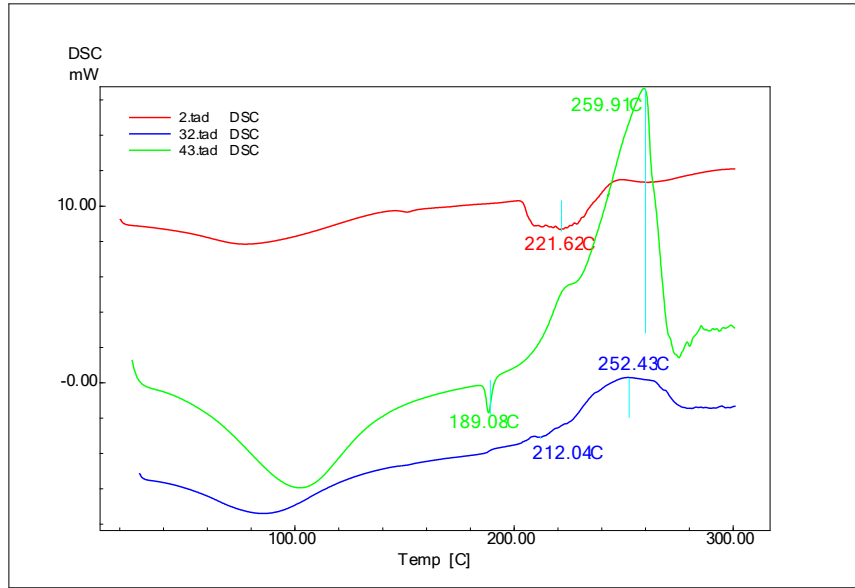
# Could not predict the incompatibility or compatibility



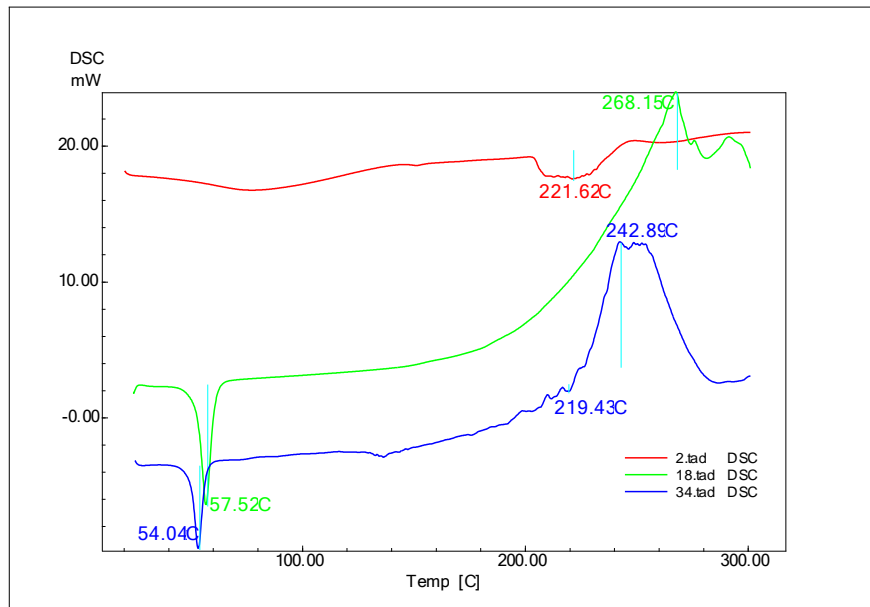
Acarbose (2), EC (4), Binary Mixture (21)



Acarbose (2), HPC (f34), Binary Mixture (24)

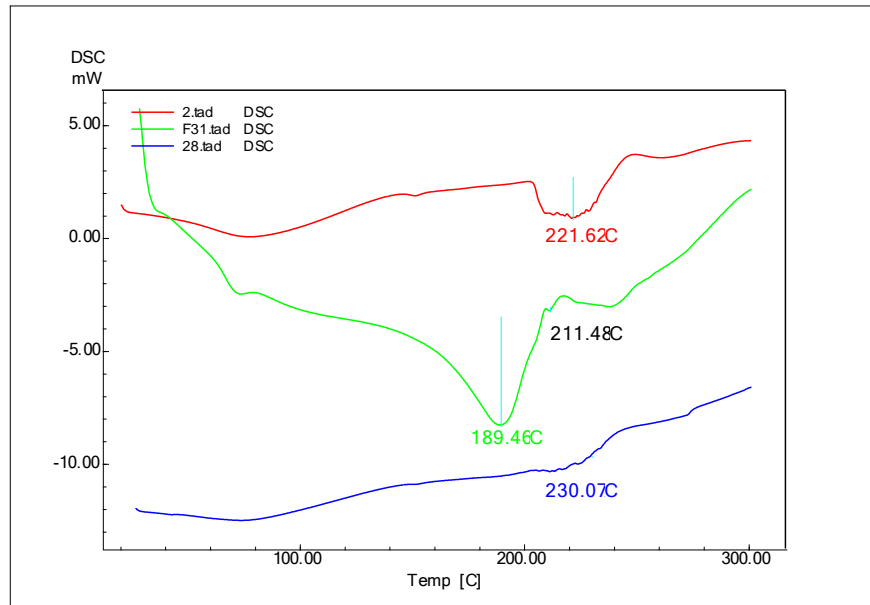


Acarbose (2), Na Alginate (43), Binary Mixture (32)

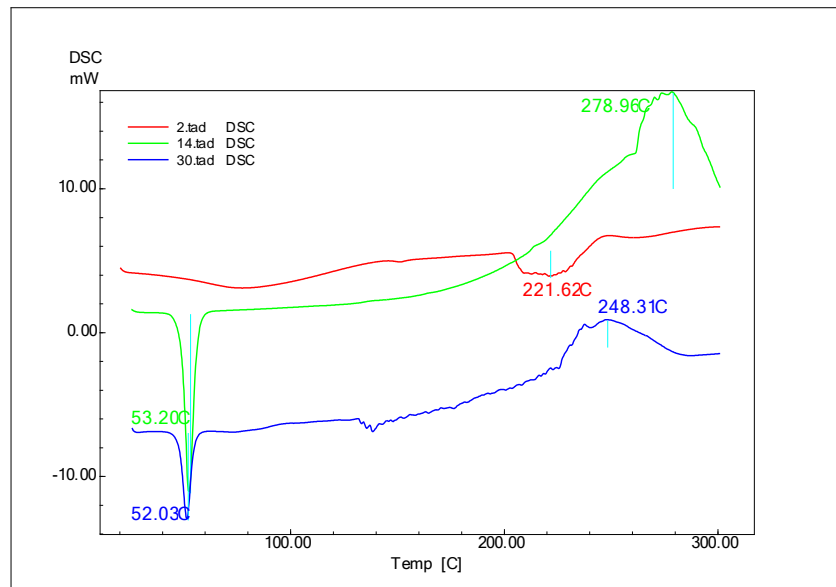


Acarbose (2), Poloxamer (18), Binary Mixture (34)

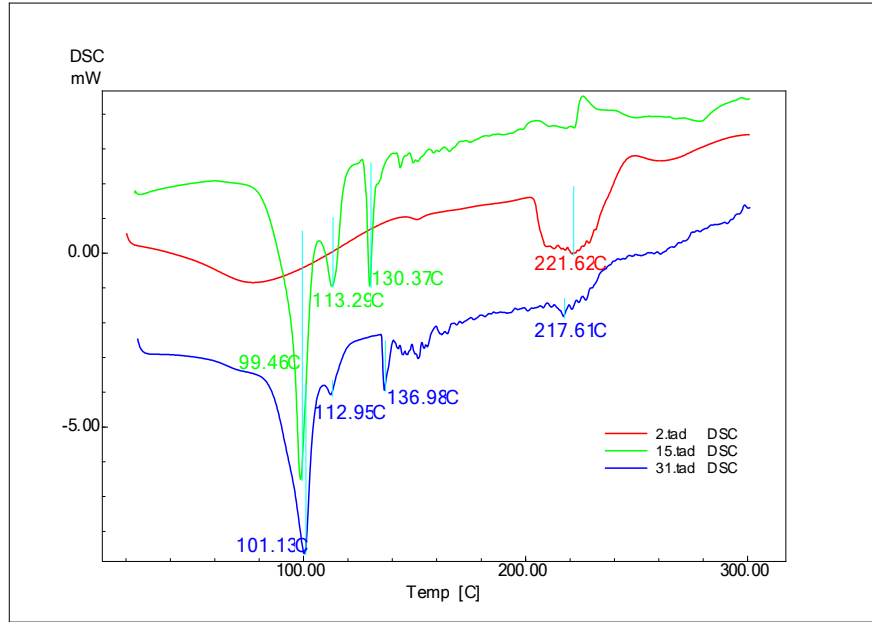
## Incompatible samples



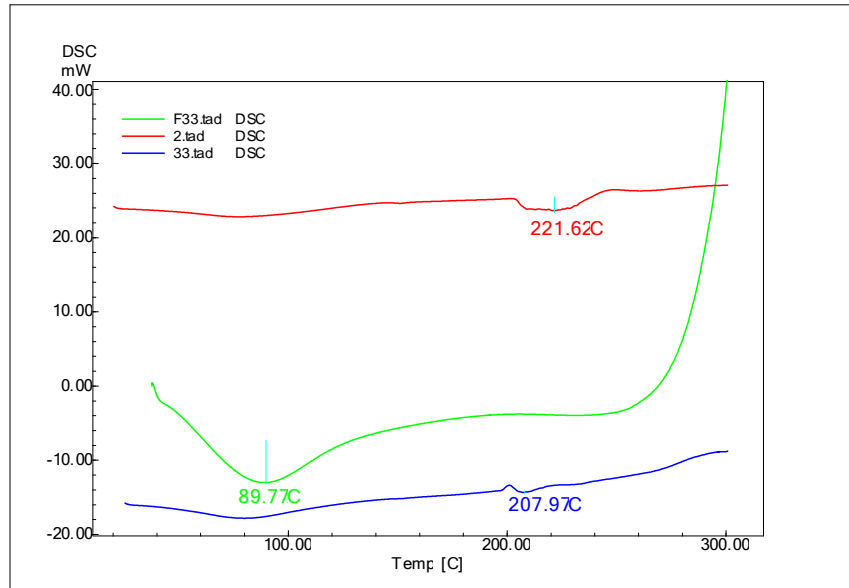
Acarbose (2), Eudragite (f31), Binary Mixture (28)



Acarbose (2), PEG 2000 (14), Binary Mixture (30)



Acarbose (2), Mg Stearate (15), Binary Mixture (31)



Acarbose (2), Na CMC (f33), Binary Mixture (33)