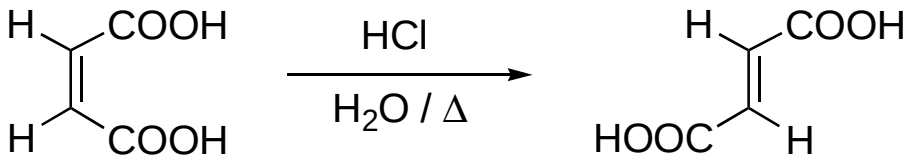
EXPERIMENTATION IN ORGANIC CHEMISTRY

LESSON 1. ISOMERIZATION REACTION. SYNTHESIS OF FUMARIC ACID FROM MALEIC ACID

REACTION:



REAGENTS

Maleic acid; concentrated HCl; HCl (1M)

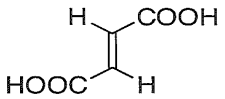
MATERIALS:

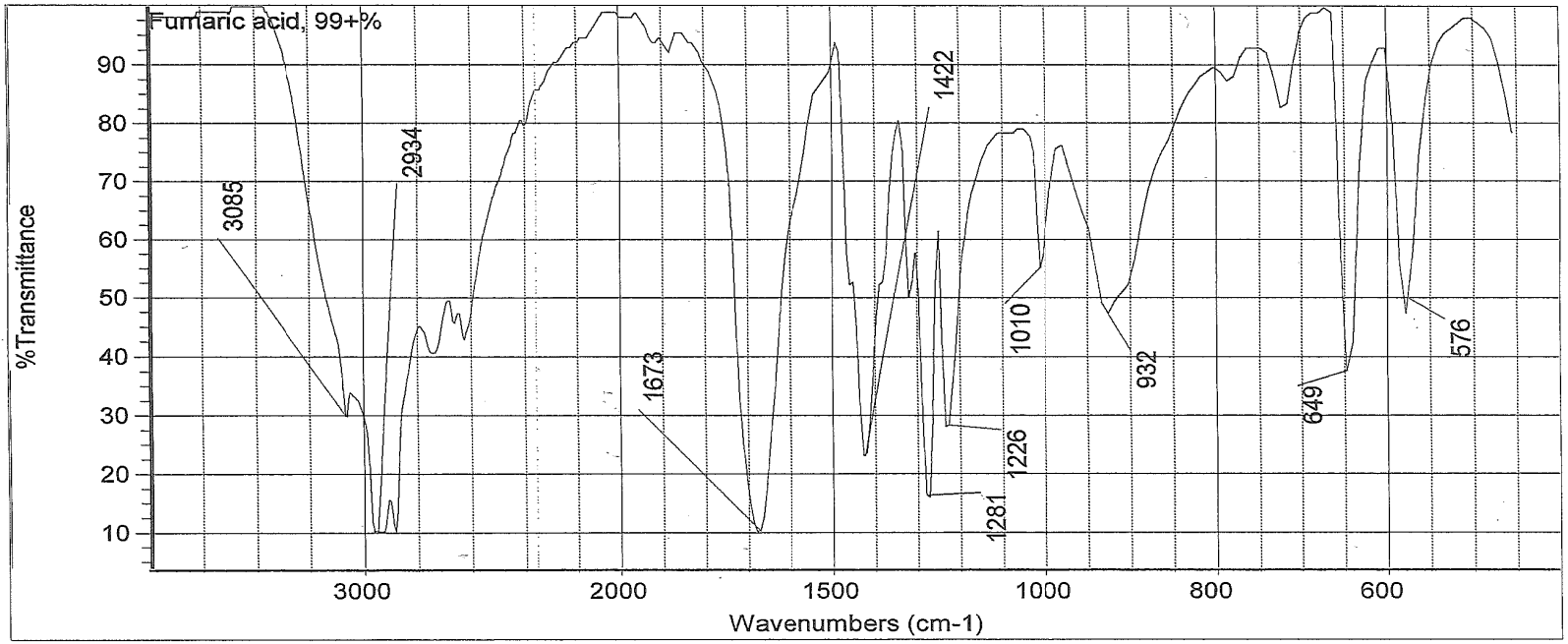
10 mL round bottomed flask; reflux condenser; heater; magnetic stirrer; oil or glycerin bath

PROCEDURE:

1 g of maleic acid is placed in a 10 mL round bottomed flask, together with 1.2 mL of water and 2 mL of concentrated HCl. The suspension is heated under reflux for 30 minutes. After cooling in an ice/water bath, the resulting crystals are filtered off and dried under vacuum. Finally, they are recrystallized from 1M HCl.

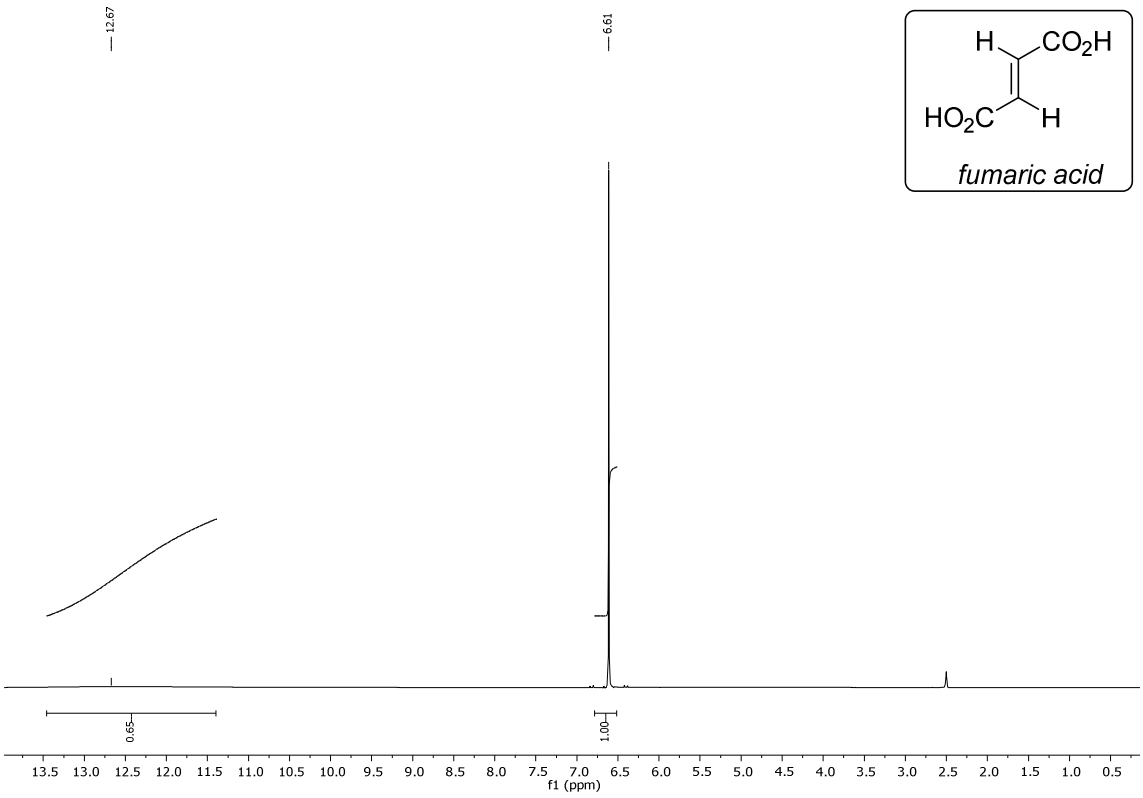
The melting point of the resulting pure product is determined.



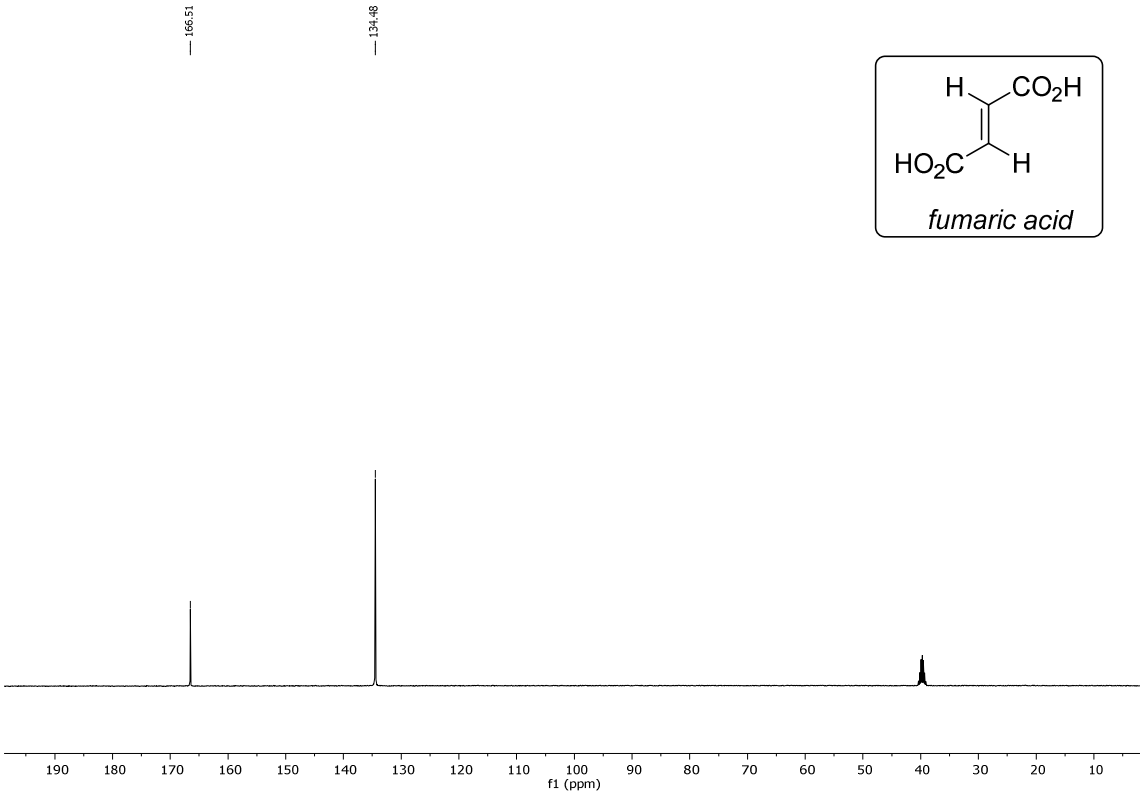


azido fumarikoa

Nºbarridos: 10
Resolución: 2 cm-1
Espectro: Transmisión



^{1}H NMR (400 MHz, DMSO-d_6) δ 12.67, 6.61.



^{13}C NMR (101 MHz, DMSO-d_6) δ 166.5, 134.5.