

Box III Text of the abstract

A process for the preparation of C4 oxygenate compounds, e.g. threose, erythrose and erythrulose, from a composition comprising C1-3 oxygenate compounds, wherein the process is carried out in the presence of a crystalline microporous material comprising a small or medium-pore structure. The crystalline microporous materials comprise a ring pore structure selected from one or more of the group consisting of an eightmembered ring pore structure and a ten-membered ring pore structure. The crystalline microporous materials preferably has a structure selected from the group consisting of CHA, LTA, MFI, MEL, MTT, MWW, TON, HEU, AEL, AFO, and FER structure.