C L A I M S

1. Process for the preparation of an olefin product comprising ethylene and/or propylene, which process comprises the steps of

a) cracking a paraffin feedstock comprising C2 - C5 paraffins under cracking conditions in a cracking zone to obtain a cracker effluent comprising olefins;

b) converting an oxygenate feedstock in an oxygenate-to-olefins conversion system, comprising a reaction zone in which an oxygenate feedstock is contacted with an oxygenate conversion catalyst under oxygenate conversion conditions, to obtain a conversion effluent comprising ethylene and/or propylene;

c) combining at least part of the cracker effluent and at least part of the conversion effluent to obtain a combined effluent, and separating an olefin product stream comprising ethylene and/or propylene from the combined effluent, wherein the paraffin feedstock comprises ethane, and wherein the cracking conditions in the cracking zone are selected such that 60 wt% or less of ethane in the paraffin feedstock are converted during a single pass through the cracking zone.

2. Process according to claim 1, wherein the cracking conditions in the cracking zone are selected such that 55 wt% or less, preferably 50 wt% or less, of ethane are converted during a single pass through the cracking zone.

3. Process according to claim 1 or 2, wherein the paraffin feedstock comprises butane.

4. Process according to claim 3, and wherein the butane is at least partially obtained from the combined effluent.

5. Process according to claim 3 or 4, wherein the butane is at least partially obtained by hydrogenating an unsaturated C4 component of the combined effluent.

6. Process according to any one of claims 3-5, wherein the cracking conditions in the cracking zone are selected such that 98 wt% or less, preferably 97 wt% or less, more preferably 95 wt% or less, of butane is converted during a single pass through the cracking zone.

7. Process according to any one of claims 1-6, wherein the cracker effluent and/or the conversion effluent comprises a C4 portion comprising unsaturates, and wherein the process further comprises recycling at least part of the C4 portion as recycle feedstock to step b).

8. Process according to claim 7, further comprising at least partially hydrogenating at least part of the C4 portion, to obtain an least partially hydrogenated C4 feedstock before recycling this feedstock to step (b).

9. Process according to any one of claims 1-8, wherein step a) comprises providing a cracking system having a plurality of furnaces, and operating at least two furnaces at different severities.

10. Process according to any one of claims 1-9, wherein step a) comprises providing a cracking system having a plurality of furnaces, including a first furnace for a relatively lighter feedstock portion and a second furnace for a relatively heavier feedstock portion, and operating the first and second furnaces at selected different severities.

11. Process according to any one of claims 1-10, wherein the paraffin feedstock comprises propane.

CLAIMS

1. Process for the preparation of an olefin product comprising ethylene and/or propylene, which process comprises the steps of

a) cracking a paraffin feedstock comprising C2 - C5 paraffins under cracking conditions in a cracking zone to obtain a cracker effluent comprising olefins;

b) converting an oxygenate feedstock in an oxygenate-to-olefins conversion system, comprising a reaction zone in which an oxygenate feedstock is contacted with an oxygenate conversion catalyst under oxygenate conversion conditions, to obtain a conversion effluent comprising ethylene and/or propylene;

c) combining at least part of the cracker effluent and at least part of the conversion effluent to obtain a combined effluent, and separating an olefin product stream comprising ethylene and/or propylene from the combined effluent, wherein the paraffin feedstock comprises ethane, and wherein the cracking conditions in the cracking zone are selected such that 60 wt% or less of ethane in the paraffin feedstock are converted during a single pass through the cracking zone;

wherein the paraffin feedstock comprises propane.