

Table. Catalytic transformations on technetium catalysts.

Catalyst		Initial compound	Products	Conditions of reactions
%	support			
Dehydrogenation				
0,1-5,0 Tc	Al ₂ O ₃ , MgO, rare earths	cyclohexane	benzene (1), cyclohexene (2), methylcyclopentan(3), toluol (4)	250-500°C, flow reactor, 1- main prod., 2,3,4- traces
1,0-5,0 Tc	Al ₂ O ₃ , MgO	n-hexane	benzene (1), toluol (2), hexene (3), iso-hexenes (4)	410-570°C, flow reactor, 1-main prod., 2,3,4-traces
3,2 Tc	Al ₂ O ₃	n-hexene	benzene	450-550°C
1,0-4,7 Tc	Al ₂ O ₃	n-heptane	toluol (1), iso-heptane (2), benzene (3)	450-600°C, flow reactor, 1-main prod., 2,3-traces
1,0-5,2 Tc	Al ₂ O ₃	isopropanol	acetone	100-200°C, flow reactor, > 200°C decomposition
1,0-3,0 Tc	rare earths, MgO, TiO ₂	isopropanol	acetone	150-300°C
0,01-0,06 Tc	rare earths	isopropanol	acetone	220-400°C
5,0 TcS ₂	Y ₂ O ₃ , Al ₂ O ₃	isopropanol	acetone (1), propilen (2), non-identified prod.(3)	130-300°C, flow reactor 1,2-main prod., 3-traces
5,0 TcS ₂	Al ₂ O ₃	cyclohexane	benzene	250-340°C
4,0 TcO ₂	Al ₂ O ₃	isopropanol	acetone	100-150°C
4,0 TcO ₂	Y ₂ O ₃	isopropanol	acetone	150-250°C
4,0-6,6 TcO ₂	Al ₂ O ₃	cyclohexane	benzene	250-320°C