Claims:

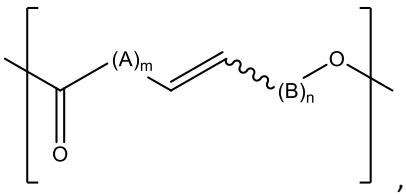
1. A process for preparing and isolating a macrocyclic lactone by the cyclo-depolymerization of an olefin-containing random polyester contained in a reaction mixture, the process comprising the steps of:

i) depolymerizing the olefin-containing random polyester in a reaction mixture to form fragments capable of intramolecular cyclisation;

ii) intramolecular cyclization of said fragments to form a desired macrocyclic lactone; and

iii) concomitant separation of the macrocyclic lactone from the reaction mixture,

wherein the olefin-containing polyester contains at least one unit of the formula



,

wherein

A is a divalent radical –CHR-, wherein R is hydrogen or a C_{1-4} alkyl group;

B is a divalent radical –CHR'-, wherein R' is hydrogen or a C_{1-4} alkyl group;

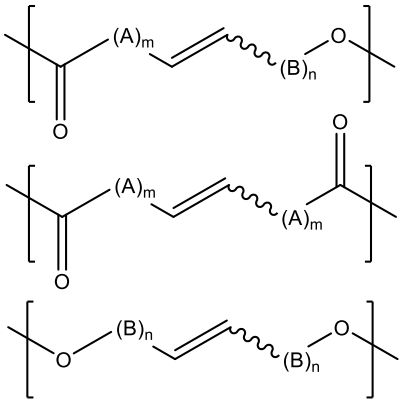
the sum of n and m is an integer selected from 11, 12, 13 or 14; and

wherein the divalent radicals A and B in the unit may be the same or different;

wherein the cyclo-depolymerization reaction is effected by metathesis, and

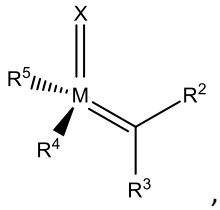
wherein the metathesis reaction is catalysed with a tungsten or molybdenum metathesis catalyst.

2. A process according to claim 1, wherein the olefin-containing polyester contains at least one each of the following units



3. A process according to any of the preceding claims, wherein the polyester contains at least 5 to 50 units.

4. A process according to any of the preceding claims, wherein the metathesis reaction is catalysed with a catalyst selected from the general formula



,

wherein

M = Mo or W;

X is O, or N-R^1, wherein R^1 is aryl, heteroaryl, alkyl, or heteroalkyl, optionally substituted;

R^2 and R^3 can be the same or different and are hydrogen, alkyl, alkenyl, heteroalkyl, heteroalkenyl, aryl, heteroaryl or alkoxy, which are optionally substituted;

R^5 is alkyl, alkoxy, heteroalkyl, aryl, aryloxy, heteroaryl, silylalkyl, silyloxy, optionally substituted; and

R^4 is a residue R^6-X'-, wherein X' = O and R^6 is aryl or heteroaryl, which are optionally substituted; or X' = S and R^6 is aryl or heteroaryl, which are optionally substituted; or X' = O and R^6 is (R^7, R^8, R^9)Si; wherein R^7, R^8, R^9 are alkyl or phenyl, which are optionally substituted; or X' = O and R^6 is (R^{10}, R^{11}, R^{12})C, wherein R^{10}, R^{11}, R^{12} are independently selected from phenyl, alkyl; which are optionally substituted;

or R^4 and R^5 are linked together and are bound to M via oxygen, respectively.

5. A process according to any of the preceding claims, wherein the concomitant separation of the macrocyclic lactone from the reaction mixture is effected by distillation.

6. A process according to any of the preceding claims, wherein the macrocyclic lactone is selected from the group consisting of *E/Z*-7-Ambrettolide; *E/Z*-9-Ambrettolide; *E/Z*-Nirvanolide; and *E/Z*-Habanolide.

7. A process according to claim 6, wherein the macrocyclic lactone is hydrogenated to form the hydrogenated macrocyclic lactone corresponding to *E/Z*-7-Ambrettolide; *E/Z*-9-Ambrettolide; *E/Z*-Nirvanolide; or *E/Z*-Habanolide.

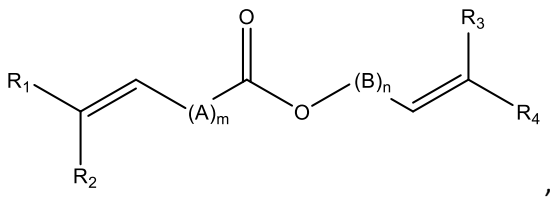
8. A process according to any of the preceding claims, wherein the polyester is prepared by acyclic diene metathesis polymerization of a diene-ester.

9. A process according to claim 8, wherein the diene-ester contains at least one terminal olefin group.

10. A process according to claim 8 or 9, wherein the diene-ester contains one terminal olefin group and one internal olefin group.

11. A process according to claim 8 or 9 wherein the diene-ester contains two terminal olefin groups.

12. A process according to any of claims 8 through 11, wherein the diene-ester has the following formula



,

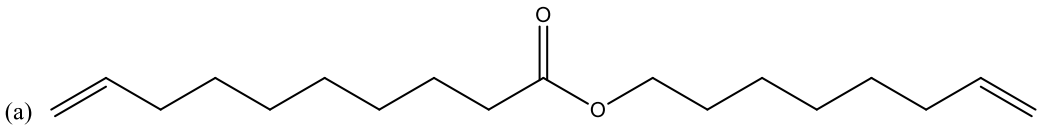
wherein

A, B, and the sum of n and m are as defined in claim 1; and

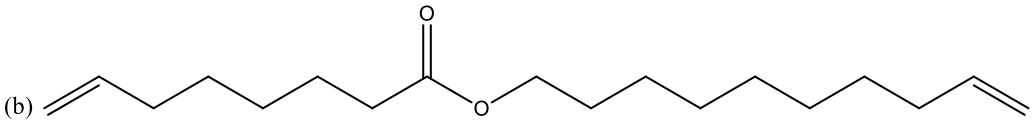
R_1, R_2, R_3 and R_4, are residues representing H or $C_{1\text{-}10}$ alkyl, provided that only one of R_1, R_2, R_3 and R_4 residues can be $C_{1\text{-}10}$ alkyl, the remaining residues all being H.

13. A process according to claim 12, wherein the diene-ester is selected from the group consisting of

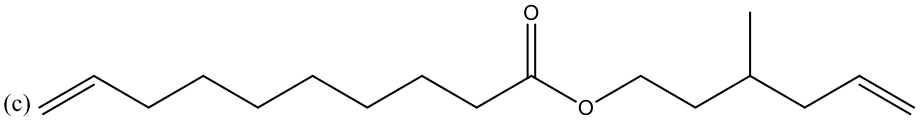
(a)



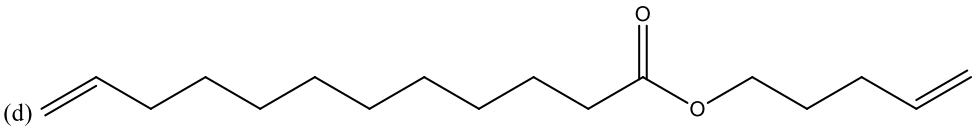
(b)



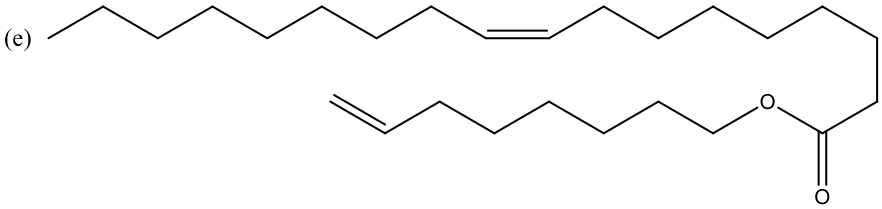
(c)



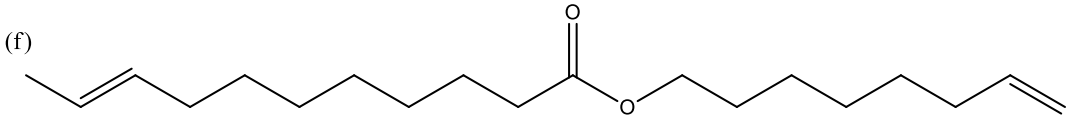
(d)



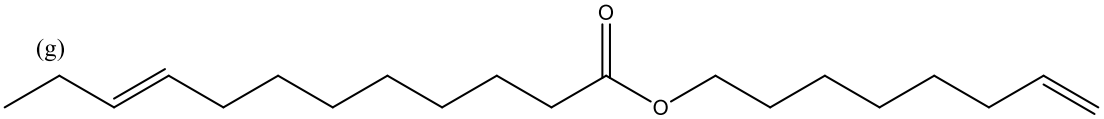
(e)



(f)

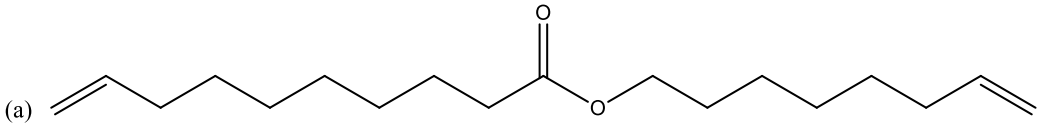


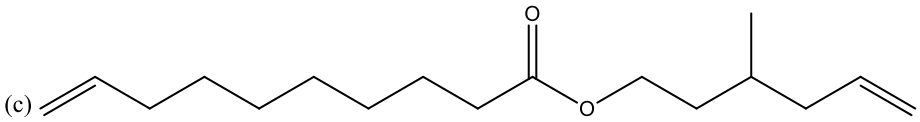
(g)

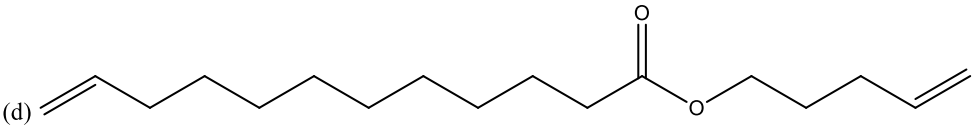


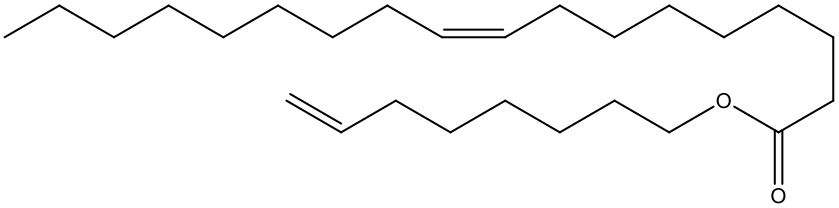
14. A diene-ester selected from compounds (a), (c), (d), (e), (f) and (g):

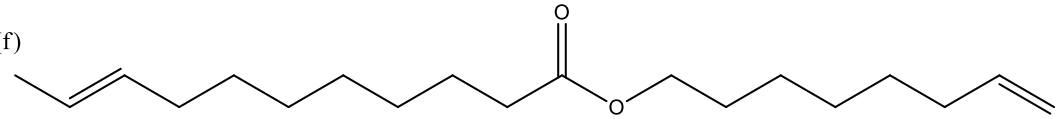
(a)



(c) 

(d) 

(e) 

(f) 

(g) 