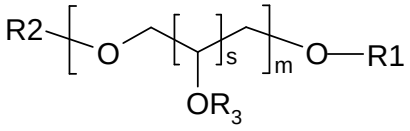
CLAIMS

1. A composition in the form of a water-in-oil emulsion comprising:

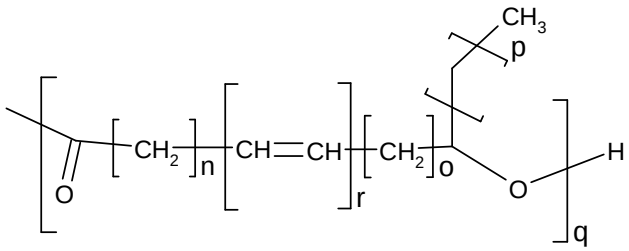
- from 20% to 40% (v/v) of aqueous phase, in the form of droplets, comprising an anti-cancer agent,
- from 60% to 80% (v/v) of lipid phase comprising an iodized oil and at least one surfactant of formula (I) in a proportion, by weight of surfactant relative to the total volume of the composition, of 0.3% to 5%, formula (I) of said surfactant being the following:



(I)

in which:

- s is 0 or 1,
- m represents an integer from 2 to 30,
- R_1 represents a group of formula (II)



(II)

in which n represents an integer from 4 to 10, o represents an integer from 1 to 4, p represents an integer from 3 to 7, q represents an integer from 2 to 10 and r is 0 or 1,

- R_2 represents a hydrogen atom or is identical to R_1, and
- each R_3 independently represents a hydrogen atom or is identical to R_1.

2. The composition as claimed in claim 1, wherein each R_3 represents a hydrogen atom.

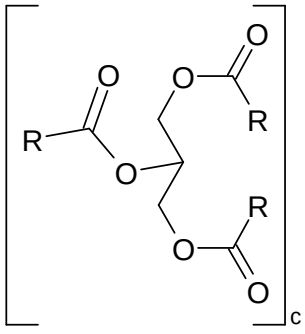
3. The composition as claimed in claim 1 or 2, characterized in that it has, at 20°C and 1 bar, and within 24 hours following its preparation a visual phase separation of less than 5% by volume relative to the total composition in emulsion form, or characterized in that the average droplet size of which varies by less than 10% 24 hours after its preparation.

4. The composition as claimed in any one of claims 1 to 3, characterized in that the anti-cancer agent is chosen from anthracyclines, platinum complexes, mitoxantrone, nemorubicin, mitomycin C, bleomycin, actinomycin D, irinotecan, 5-fluorouracil, sorafenib, sunitinib, regorafenib, brivanib, orantinib, linsitinib, erlotinib, cabozantinib, foretinib, tivantinib, fotemustine, tauromustine (TCNU), carmustine, cytosine C, cyclophosphonamide, cytosine arabinoside, paclitaxel, docetaxel, methotrexate, everolimus, PEG-arginine deiminase, the tegafur/gimeracil/oteracil combination, muparfostat, peretinoin, gemcitabine, bevacizumab and ramucirumab, floxuridine, GM-CSF, molgramostim, sargramostim, OK-432, interleukin-2, interleukin-4 and TNFalpha, ^{125}I-labeled anti-CEA (carcinoembryonic antigen) antibodies, microspheres loaded with one of these compounds, radioelements and complexes of said radioelements with macrocyclic chelates, magnetic particles based on an iron compound and/or on a gadolinium chelate, radioactive microspheres, nucleic acid sequences chosen from deoxyribonucleic acid and ribonucleic acid sequences and a mixture thereof.

5. The composition as claimed in the preceding claim, characterized in that the anthracyclines are chosen from doxorubicin, epirubicin, nemorubicin and idarubicin.

6. The composition as claimed in any one of claims 1 to 5, characterized in that the aqueous phase also comprises a densifying agent chosen from nonionic iodinated contrast products and a mixture thereof.

7. The composition as claimed in any one of claims 1 to 6, characterized in that the lipid phase also comprises a non-iodized oil chosen from linseed oil, soybean oil, palm oil, coconut oil, caster oil, corn oil, cottonseed oil, peanut oil, sesame oil, sunflower oil, safflower oil, almond oil, olive oil, poppy oil and an oil comprising or consisting of a mixture of fatty acid triglycerides of formula:



wherein R is an aliphatic chain comprising from 3 to 35 carbon atoms, with the proviso that more than 95% of said fatty acids are C8 and/or C10.

8. The composition as claimed in any one of the preceding claims, characterized in that the surfactant has an HLB of 1 to 8.

9. The composition as claimed in any one of the preceding claims, characterized in that the surfactant is chosen from polyglyceryl polyricinoleate and PEG-30 dipolyhydroxystearate.

10. The composition as claimed in any one of the preceding claims, characterized in that the iodized oil comprises ethyl esters of iodized fatty acids of poppy oil or of olive oil.

11. The composition as claimed in any one of claims 1 to 10, characterized in that the size of the aqueous phase droplets is from 1 to 200 µm.

12. The composition as claimed in any one of the preceding claims, characterized in that it has a viscosity at 20°C included from 100 to 200 mPa.s and/or a viscosity at 37°C included from 40 to 80 mPa.s.

13. The composition as claimed in any one of claims 1 to 12, for use thereof in the treatment of cancer or metastases thereof.

14. A method for preparing a composition as claimed in any one of claims 1 to 13, comprising the following steps:
a) mixing the surfactant as defined in claim 1 or 2 in the iodized oil, and
b) mixing the solution obtained in step a) with an aqueous solution comprising an anti-cancer agent.

15. The use of a kit comprising:
- a surfactant of formula (I) as defined in claim 1 or 2,
- an iodized oil,
as combination products for vectorizing an anti-cancer agent.