



## Design and production of nanoparticles formulated from nano-emulsion templates-a review

Submitted by Emmanuel Lemoine on Fri, 07/18/2014 - 13:56

Titre	Design and production of nanoparticles formulated from nano-emulsion templates-a review
Type de publication	Article de revue
Auteur	Anton, Nicolas [1], Benoît, Jean-Pierre [2], Saulnier, Patrick [3]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2008
Langue	Anglais
Date	24/06/2008
Numéro	3
Pagination	185-99
Volume	128
Titre de la revue	Journal of Controlled Release
ISSN	1873-4995

### Résumé en anglais

A considerable number of nanoparticle formulation methods are based on nano-emulsion templates, which in turn are generated in various ways. It must therefore be taken into account that active principles and drugs encapsulated in nanoparticles can potentially be affected by these nano-emulsion formulation processes. Such potential differences may include drug sensitivity to temperature, high-shear devices, or even contact with organic solvents. Likewise, nano-emulsion formulation processes must be chosen in function of the selected therapeutic goals of the nano-carrier suspension and its administration route. This requires the nanoparticle formulation processes (and thus the nano-emulsion formation methods) to be more adapted to the nature of the encapsulated drugs, as well as to the chosen route of administration. Offering a comprehensive review, this paper proposes a link between nano-emulsion formulation methods and nanoparticle generation, while at the same time bearing in mind the above-mentioned parameters for active molecule encapsulation. The first part will deal with the nano-emulsion template through the different formulation methods, i.e. high energy methods on the one hand, and low-energy ones (essentially spontaneous emulsification and the phase inversion temperature (PIT) method) on the other. This will be followed by a review of the different families of nanoparticles (i.e. polymeric or lipid nanospheres and nanocapsules) highlighting the links (or potential links) between these nanoparticles and the different nano-emulsion formulation methods upon which they are based.

URL de la notice <http://okina.univ-angers.fr/publications/ua3781> [4]

### Liens

[1] [http://okina.univ-angers.fr/publications?f\[author\]=24694](http://okina.univ-angers.fr/publications?f[author]=24694)

- [2] <http://okina.univ-angers.fr/j.benoit/publications>
- [3] <http://okina.univ-angers.fr/patrick.saulnier/publications>
- [4] <http://okina.univ-angers.fr/publications/ua3781>

Publié sur *Okina* (<http://okina.univ-angers.fr>)