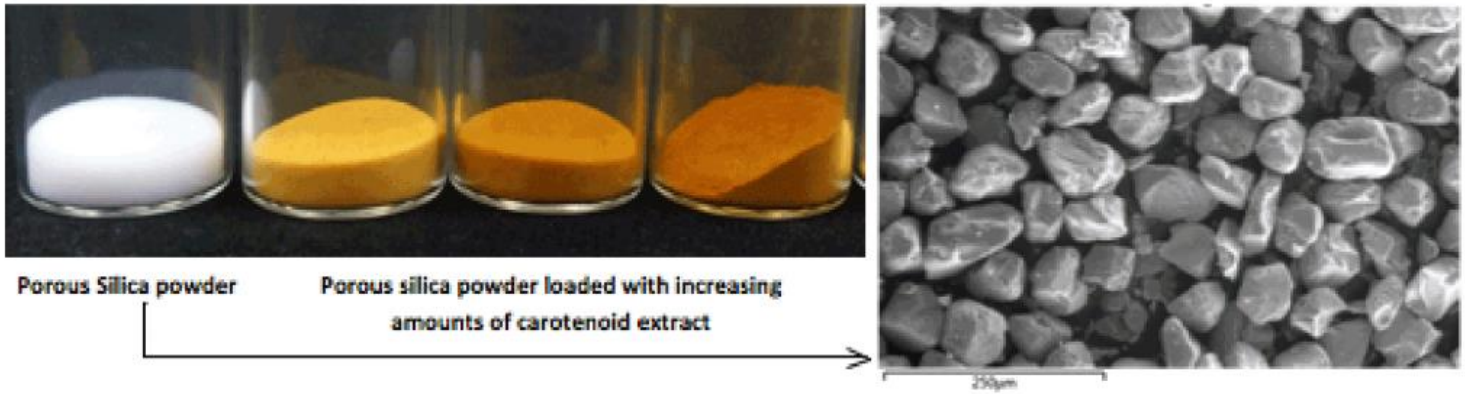
Water dispersable inorganic mesoporous carrier particles loaded with carotenoid-rich extracts from Dunaliella salina



Loading of carotenoids (and poorly soluble materials in general) into porous particles enables improved bioavailability upon e.g. oral administration.

Different strategies were tested to load a carotenoid-rich scCO2 Dunaliella extract into porous silica. Silica particles containing up to 4% of extract and with excellent powder flow properties could be produced by means of the insipient wetness technique. The dissolution rate of the carotenoid-rich scCO2 extract from loaded particles was much higher than of the extract “as is”. The loading of the carotenoids into the silica particles does not have detrimental effect on their chemical stability.

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