

Matrix-Assisted Laser Desorption Ionization time of flight mass spectrometric analysis of some curcubita oils for triacylglycerol composition

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Four varieties of curcubita plant seed oils viz, Bottle gourd (*Lagenaria vulgaris*), Snake gourd (*Tricosanthes cucumerina*), Sponge gourd (*Luffa cylindrica*) and Flat Calabash gourd (*Cucurbita maxima*) were analyzed by matrix assisted laser desorption ionization (MALDI) time of flight (TOF) mass spectrometry (MS) using α -cyano-4 hydroxycinnamic acid dissolved in acetonitrile as matrix. The Bottle gourd oil contained four major triacylglycerols (TAGs) which include trilinolein (LLL), palmitoyldilinoleoyl glycerol (PLL), oleoyldilinoleoyl glycerol (OLL) and dioleyllinoleoyl glycerol (OOL). Snake gourd oil showed three major TAGs as tripucinin (PnPnPn), palmitoyldilinoleoyl glycerol (PLL) and distearoyloleoyl glycerol (SSO). Sponge gourd oil was found to consist of four TAGs, dipalmitoyloleoyl glycerol (PPO), palmitoyldilinoleoyl glycerol (PLL), palmitoylstearyl linoleoyl glycerol (PSL) and distearoyloleoyl glycerol (SSO). Five major TAGs viz; palmitoyldilinoleoyl (PLL), trilinolenin (LnLnLn), trilinolein (LLL), stearyl dilinoleoyl glycerol (SLL) and distearoyloleoyl glycerol (SSO) were identified in flat calabash seed oil. The TAGs compositions were consistent with the fatty acid profiles obtained for the different oils by gas chromatographic technique.

ANALISI PER SPETTROMETRIA DI MASSA MALDI-TOF DELLA COMPOSIZIONE TRIGLICERIDICA DI ALCUNI OLI DI CUCURBITACEE

Quattro varietà di oli di semi di cucurbitacee, *Lagenaria vulgaris*, *Tricosanthes cucumerina*, *Luffa cylindrica* e *Cucurbita maxima*, sono state analizzate con la tecnica di spettrometria di massa MALDI-TOF usando come matrice acido α -ciano-4-idrossicinnamico dissolto in acetonitrile. *Lagenaria vulgaris* contiene quattro maggiori trigliceridi (TAG): trilinoleina (LLL), palmitoildilinoleil glicerolo (PLL), oleildilinoleil glicerolo (OLL) e dioleillinoleil glicerolo (OOL).

Tricosanthes cucumerina contiene tre trigliceridi maggiori: tripucinina (PnPnPn), palmitoildilinoleil glicerolo (PLL) e disteariloleil glicerolo (SSO). *Luffa cylindrica* è costituita da 4 TAG maggiori: dipalmitiloleil glicerolo (PPO), palmitildilinoleil glicerolo (PLL), palmitilstearyl linoleil glicerolo (PSL) e disteariloleil glicerolo (SSO). In *Cucurbita maxima* sono stati identificati cinque principali TAG: palmitildilinoleil glicerolo (PLL), trilinolenina (Ln Ln Ln), trilinoleina (LLL), stearyl dilinoleil glicerolo (SLL) e disteariloleil glicerolo (SSO). Il profilo in acidi grassi dei vari oli è stato ottenuto per analisi gascromatografica.