

**Commodity Code: 947-Mentha Oil (Arvensis) (Indian Standard-IS 528:1999)  
(Reaffirmed 2000)**

SI. No.	Characteristic	Requirement		Method of Test, Ref to
		Type 1 (Whole oil)	Type 2 (Partially Dementholized oil)	
(1)	(2)	(3)	(4)	(5)
i)	Colour and appearance	Colourless pale yellow or greenish yellow	Colourless pale yellow	IS 326 (Part 2)
ii)	Odour	Characteristics strong minty, herbal followed by cooling sensation	Characteristic, minty intense herbal followed by cooling sensation	IS 2284
iii)	Relative density at 27 <sup>0</sup> /27 <sup>0</sup> C <sup>D</sup>	0.877 3 to 0.912 3	0.892 3 to 0.912 3	IS 326 (Part 3)
iv)	Optical rotation	-35 <sup>0</sup> to -45 <sup>0</sup>	-20 <sup>0</sup> to -40 <sup>0</sup>	IS 326 (Part 4)
v)	Refractive index at 27 <sup>0</sup> C <sup>D</sup>	1.456 to 1.464 2	1.451 2 to 1.463 2	IS 326 (Part 5)
vi)	Free alcohols, as I-menthol (molecular mass 156.26), percent by mass. Min.	60	40	Annex A
vii)	Esters, as monthly acetate (molecular mass 198.28), percent by mass	3 to 15	3 to 9	IS 326 (Part 8)
viii)	Total alcohols, as menthol (molecular mass 156.26), percent by mass, Min	65	45	IS 326 (Part 9)
ix)	Kelones, as menthone (molecular mass 154.25), percent by mass (using free hydroxylamine method)	5 to 20	25 to 40	IS 326 (Part 11)

<sup>D</sup>The correction factors for relative density and refractive index for each degree Celsius change in temperature are 0.00064 and 0.00038 respectively.