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In vitro dissolution pattern of metronidazole (400mg) tablet in the presence of different fluids

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Metronidazole occurs as pale yellow crystals that is slightly soluble in water and alcohol. Our study had focused on the *in vitro* dissolution study of metronidazole in the presence of different fluids (ORS solution, rice water, lentil soup, watermelon juice, apple juice, mango juice, pomegranate juice, black and green tea.) which have been commonly using in diarrhoeal conditions. One commonly available marketed brand is used for the study. Dissolution study was performed as per mentioned in Indian Pharmacopoeia. For the analysis of study we used graphpad prism version 8 and microsoft excel. ANOVA followed by dunnett's test was performed for the comparison of % drug release in different fluids. Different dissolution medium were prepared from 200 mL of fluids and 700 mL of 0.1 N HCL. In lentil soup (mung bean) dissolution of metronidazole tablet (78.69 ± 1.89) doesn't compiled with IP specification which is significantly decreased when compared with average mean % drug release on standard dissolution medium (0.1N HCL). When compared with standard dissolution medium there is significantly decrease % drug release in rice water, watermelon, mango, pomegranate juice, black and green tea but values were within the specifications.