Band math for MODIS Rapid Response Subset geotiff data, Bolivia flood mapping

(float(b2) gt 200 ) or (((float(b1)+1)/(float(b2)+80)) gt .7) or float(b3) gt 17

where

b2=band 1

b3 = band 2

b1 = band 3

of the three channel RGB (bands 1,2,3) geotiff files.