//Macro\_Integrated\_Density

run("Clear Results");

dir1 = getDirectory("Choose Source Directory for Channel1 ");

dir2 = getDirectory("Choose Source Directory for Detected channel1\_Spot");

list1 = getFileList(dir1);

list2 = getFileList(dir2);

for (i=0; i <list1.length; i++) {

open(dir1+list1[i]);

//name1= getTitle();

//rename("channel1");

Stack.getDimensions(width, height, channels, slices, frames); title=getTitle();

roiManager("reset");

run("Set Measurements...", "area mean integrated display redirect=None decimal=5");

makeRectangle((width/4), (height/4), (width/2), (height/2));

run("Find Maxima...", "noise=2000 output=[Point Selection]");

run("Select All");

run("Duplicate...", "title=Wave");

run("Select All");

roiManager("Add");

run("Wavelet A Trou");

run("Stack to Images");

close("coeff-5");

close("coeff-4");

close("coeff-2");

close("coeff-3");

close("coeff-1");

roiManager("reset");

selectWindow("plan");

setAutoThreshold("Otsu dark");

run("Convert to Mask");

setOption("BlackBackground", true);

close("wave");

selectWindow("plan");

run("Create Selection");

roiManager("Add");

close("plan");

roiManager("Select", 0);

run("Measure");

saveAs("Tiff", dir2+list1[i]);

run("Close All");

}