

## Article

# Influence of mechanical skin treatments on dermal penetration efficacy of active ingredients

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## Supplementary material:

**Table S1:** macros used for automated threshold algorithms. Left: macro used for images obtained from the skin sections treated with sodium fluorescein solution, Right: macro used for images obtained from the skin sections treated with Nile red solution.

macro used for images obtained from the skin sections treated with sodium fluorescein solution	macro used for images obtained from the skin sections treated with Nile red solution
<pre>// Color Thresholder 1.53k // Autogenerated macro, single images only! min=newArray(3); max=newArray(3); filter=newArray(3); a=getTitle(); run("RGB Stack"); run("Convert Stack to Images"); selectWindow("Red"); rename("0"); selectWindow("Green"); rename("1"); selectWindow("Blue"); rename("2"); min[0]=0; max[0]=0; filter[0]="stop"; min[1]=60; max[1]=255; filter[1]="pass"; min[2]=0; max[2]=0; filter[2]="stop"; for (i=0;i&lt;3;i++){</pre>	<pre>// Color Thresholder 1.53k // Autogenerated macro, single images only! min=newArray(3); max=newArray(3); filter=newArray(3); a=getTitle(); run("RGB Stack"); run("Convert Stack to Images"); selectWindow("Red"); rename("0"); selectWindow("Green"); rename("1"); selectWindow("Blue"); rename("2"); min[0]=0; max[0]=0; filter[0]="stop"; min[1]=0; max[1]=0; filter[1]="stop"; min[2]=125; max[2]=255; filter[2]="pass"; for (i=0;i&lt;3;i++){</pre>

<pre> selectWindow(""+i); setThreshold(min[i], max[i]); run("Convert to Mask"); if (filter[i]=="stop")  run("Invert"); } imageCalculator("AND create", "0","1"); imageCalculator("AND create", "Result of 0","2"); for (i=0;i&lt;3;i++){   selectWindow(""+i);   close(); } selectWindow("Result of 0"); close(); selectWindow("Result of Result of 0"); rename(a); // Colour Thresholding----- run("Invert"); </pre>	<pre> selectWindow(""+i); setThreshold(min[i], max[i]); run("Convert to Mask"); if (filter[i]=="stop")  run("Invert"); } imageCalculator("AND create", "0","1"); imageCalculator("AND create", "Result of 0","2"); for (i=0;i&lt;3;i++){   selectWindow(""+i);   close(); } selectWindow("Result of 0"); close(); selectWindow("Result of Result of 0"); rename(a); // Colour Thresholding----- run("Invert"); </pre>
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**Table S2:** List of Abbreviations

AF	-	autofluorescence
AF-SC	-	autofluorescence of the stratum corneum
AI	-	active ingredient(s)
AROSA-value	-	intensity (MGV/px) after the removal of the skin's autofluorescence-value
BP	-	broad pass
LP	-	long pass
MGV/px	-	mean grey value/pixel
MPD	-	mean penetration depth
RSD	-	relative standard deviation
SC	-	stratum corneum
SCT	-	stratum corneum thickness
SD	-	standard deviation
TEWL	-	transepidermal water loss