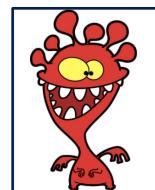
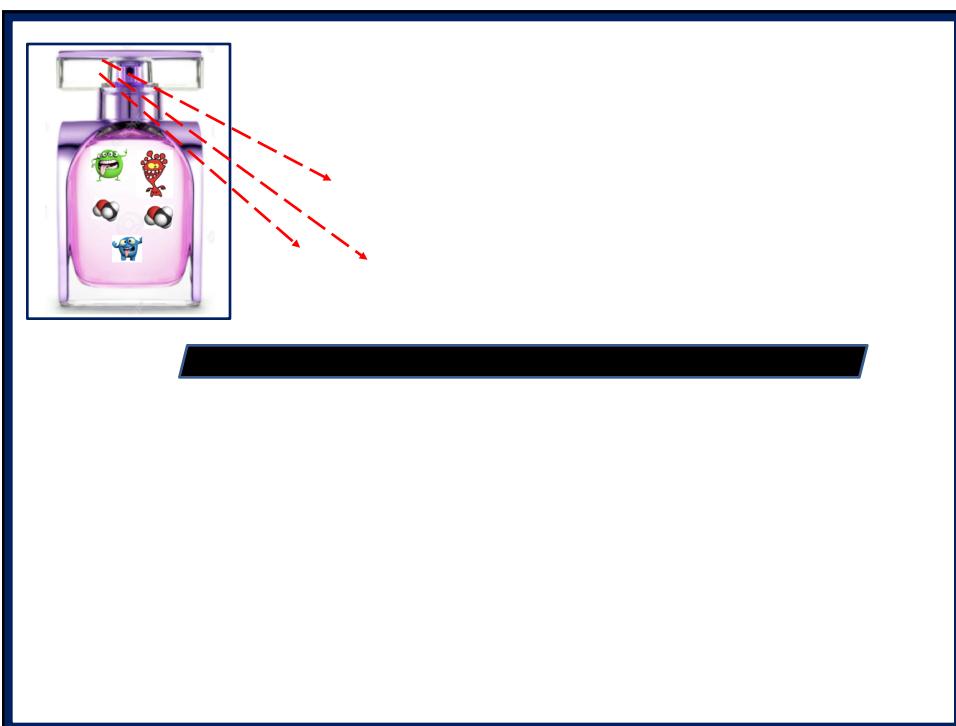
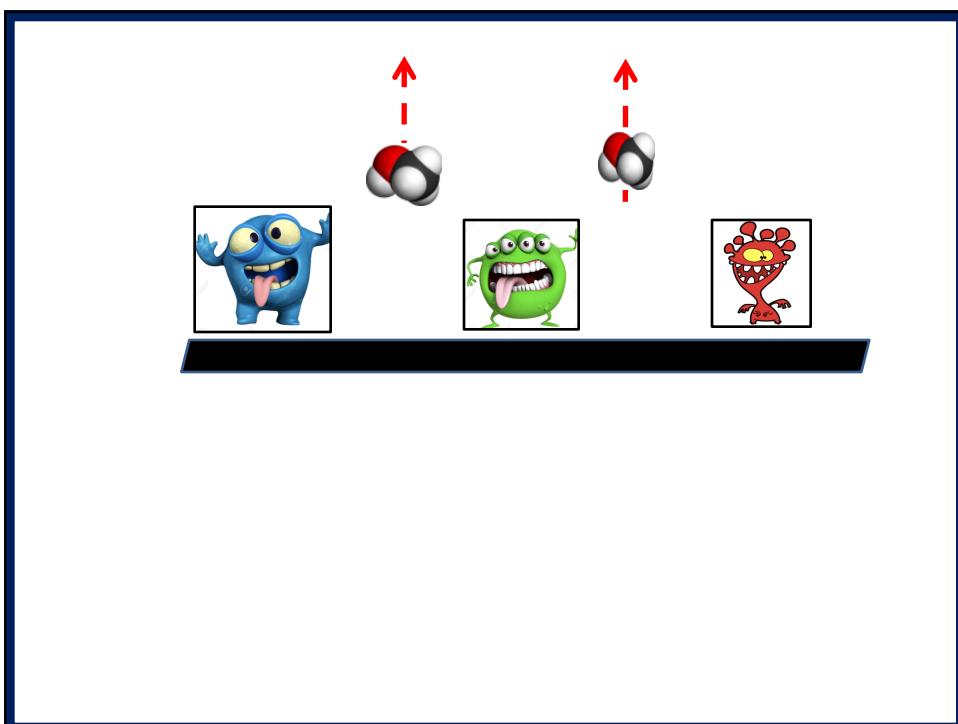
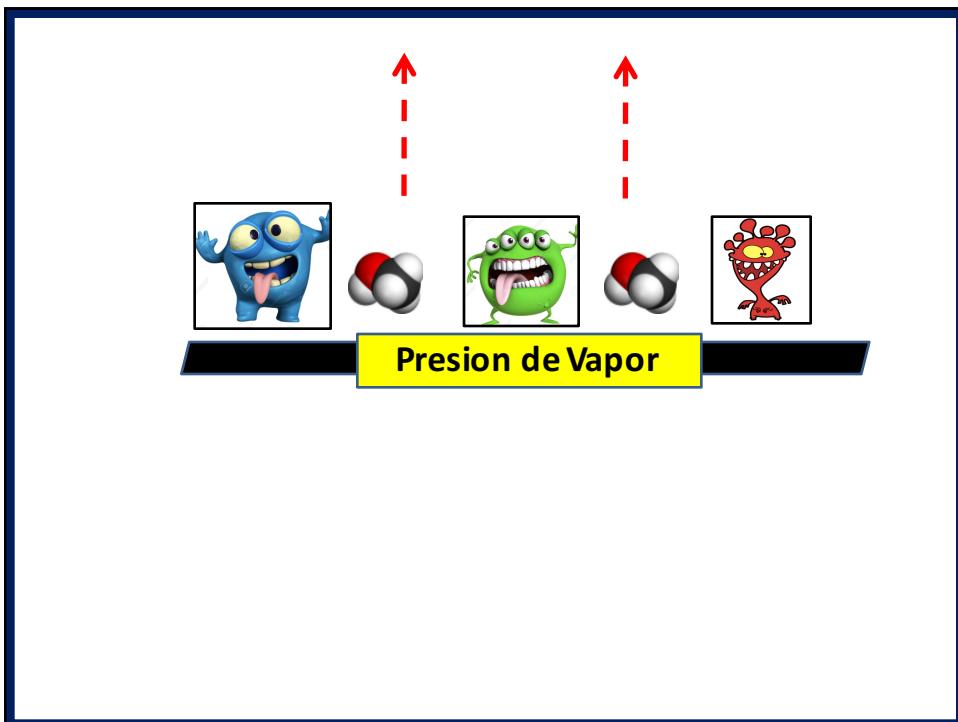


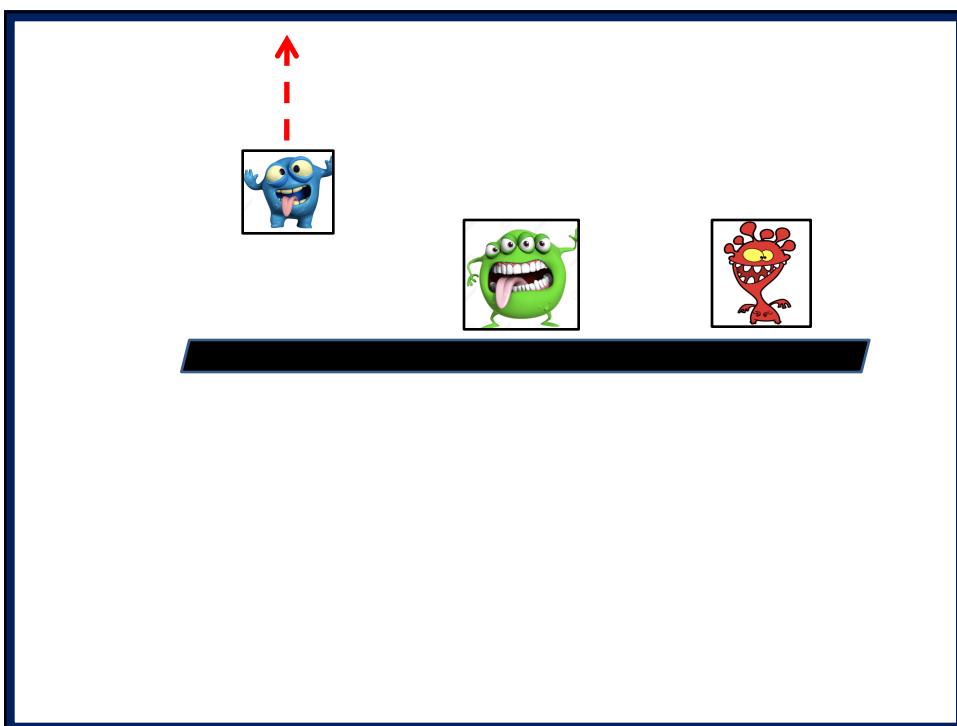
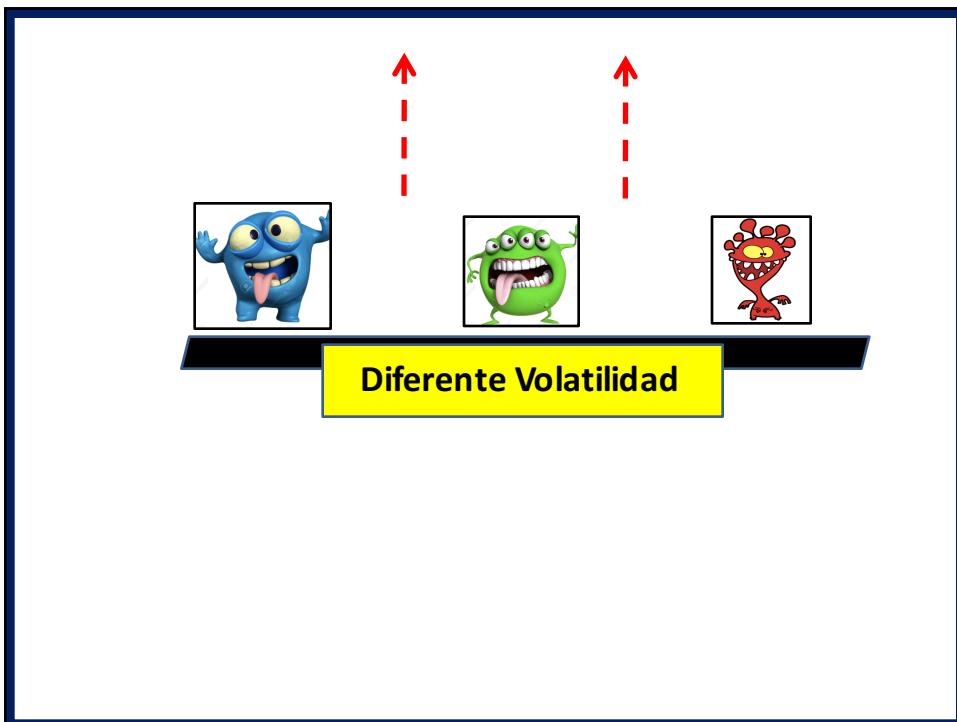
# La vida secreta de las fragancias

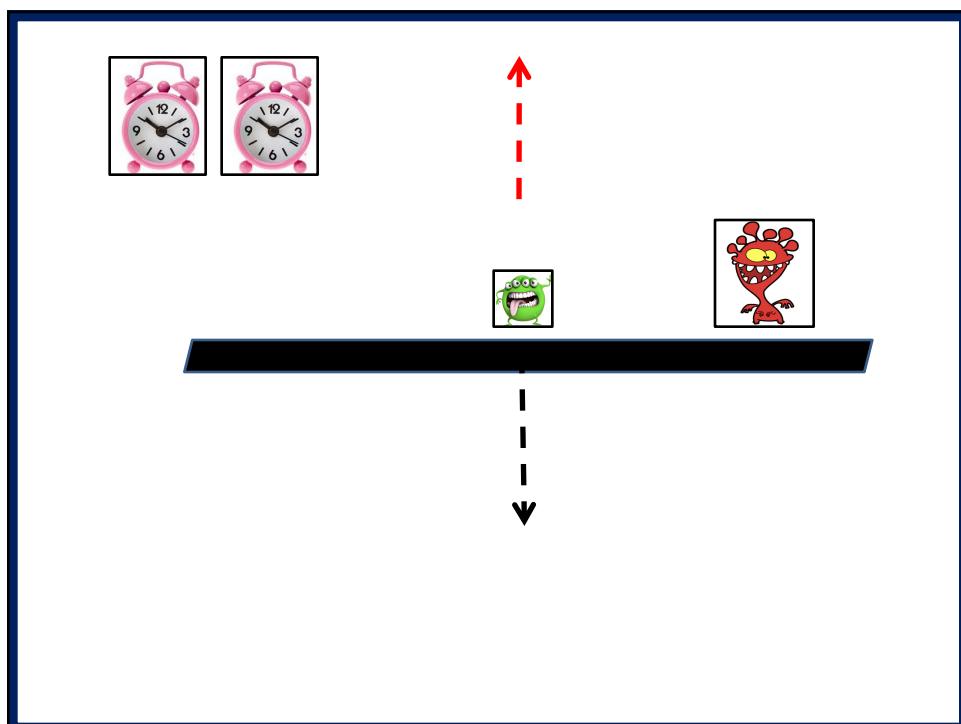
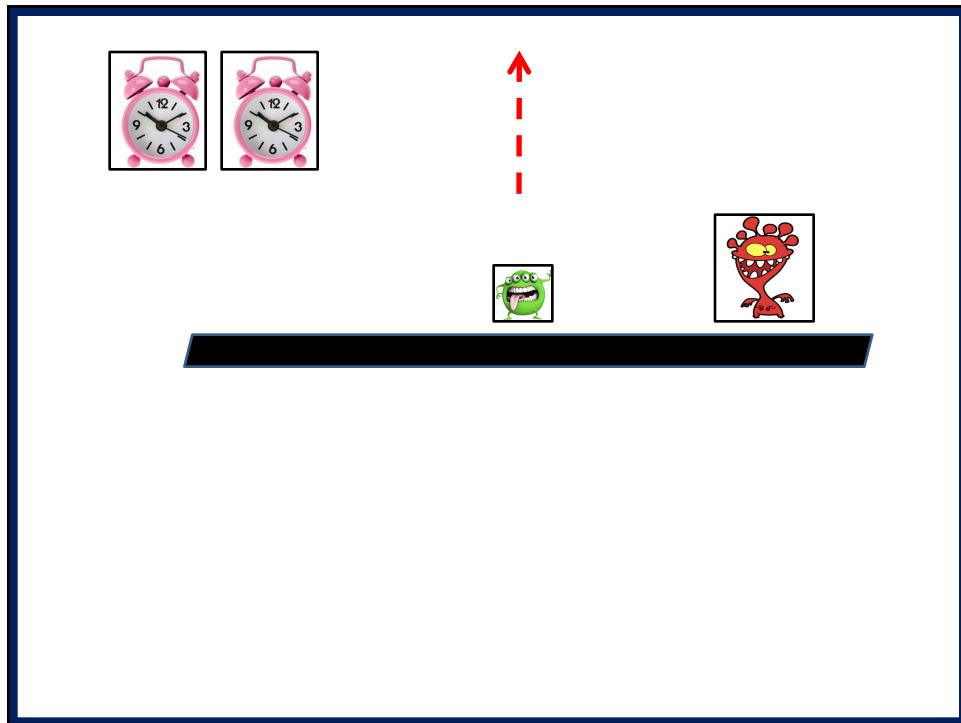
Ricardo Diez

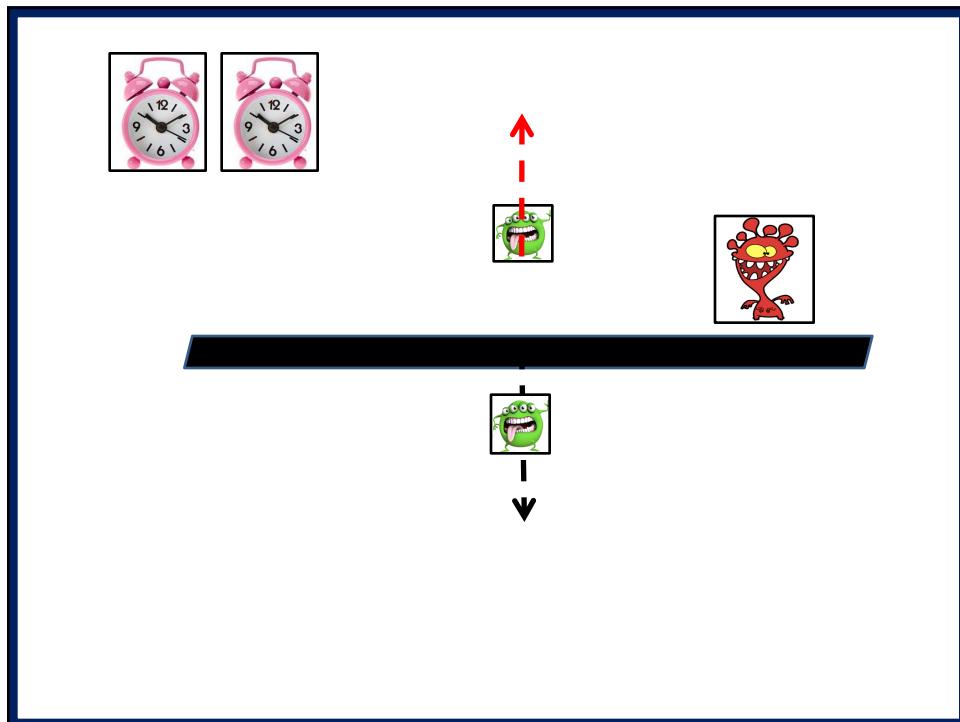
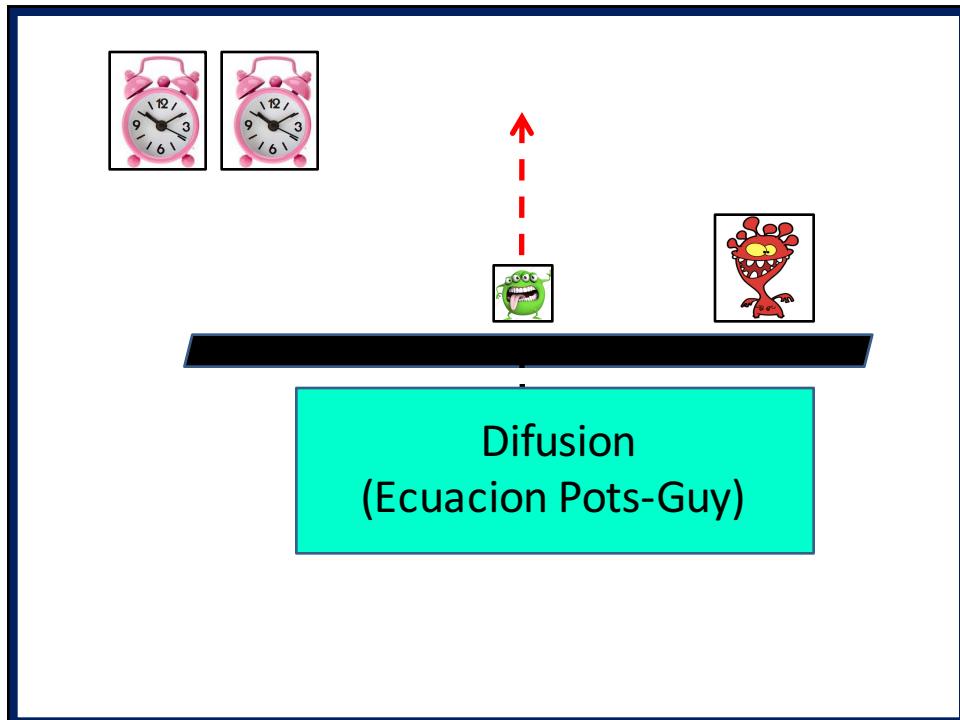


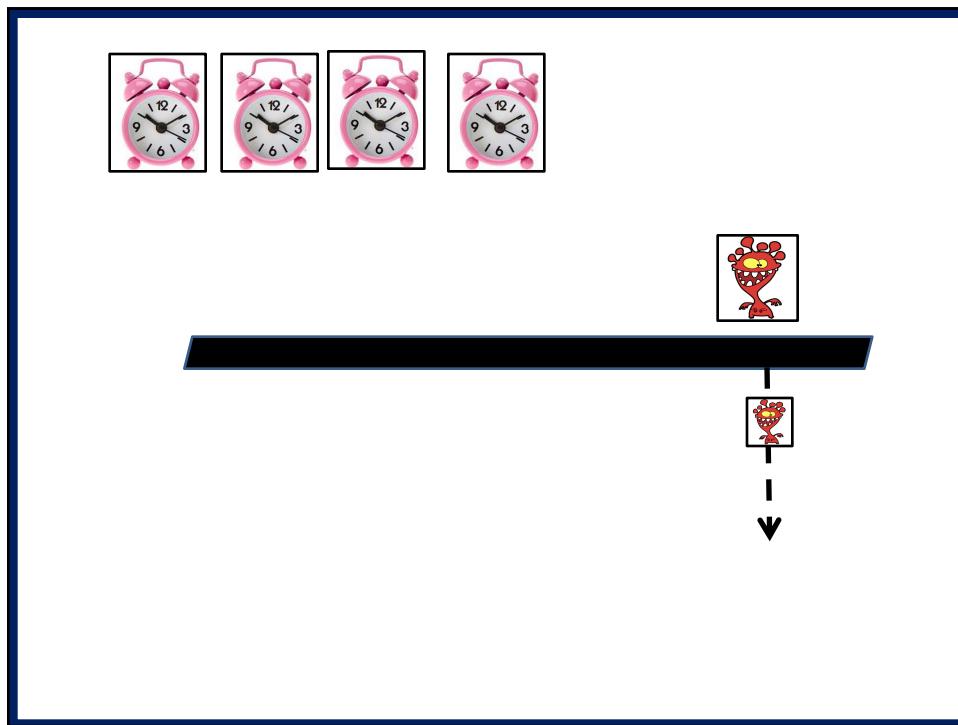






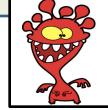






Chemical	MW	$\log P$	$J_{max}$ ( $\mu\text{g}/\text{cm}^2/\text{h}$ )
Musk ketone [1]	294.3	3.79 ± 0.40	0.05
Musk xylene [2]	297.3	3.80 ± 0.29	0.07
AHTN [3]	258.4	5.19 ± 0.66	0.14
HHCB [4]	258.4	4.87 ± 0.82	0.24
TPCA [5]	267.5	3.61 ± 0.26	1.45
OTNE [6]	234.4	4.02 ± 0.59	1.64
Diphenyl ether [7]	170.2	4.21	2.37
Methyl dihydrojasmonate [8]	226.3	2.78 ± 0.32	2.38
Diethyl phthalate [9]	222.2	2.42	2.70
Coumarin [10]	146.2	1.33	2.72
HMPCC [11]	210.3	2.61 ± 0.47	2.96
MMDHCA [12]	192.2	2.18 ± 0.35	3.15
2-phenoxyethyl isobutyrate [13]	208.3	2.74 ± 0.20	6.16
Methyl eugenol [14]	178.2	2.74 ± 0.26	7.01
Estragole [15]	148.2	3.08 ± 0.30	13.41
Benzyl acetate [16]	150.2	1.96	16.68
Methyl atratate [17]	196.2	2.30 ± 0.46	17.31
Linalool [18]	154.3	2.97	31.04
Phenylethyl alcohol [19]	122.2	1.36	43.91
d-limonene [20]	136.2	4.57	47.13

Almizcle

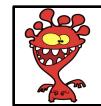


Limoneno

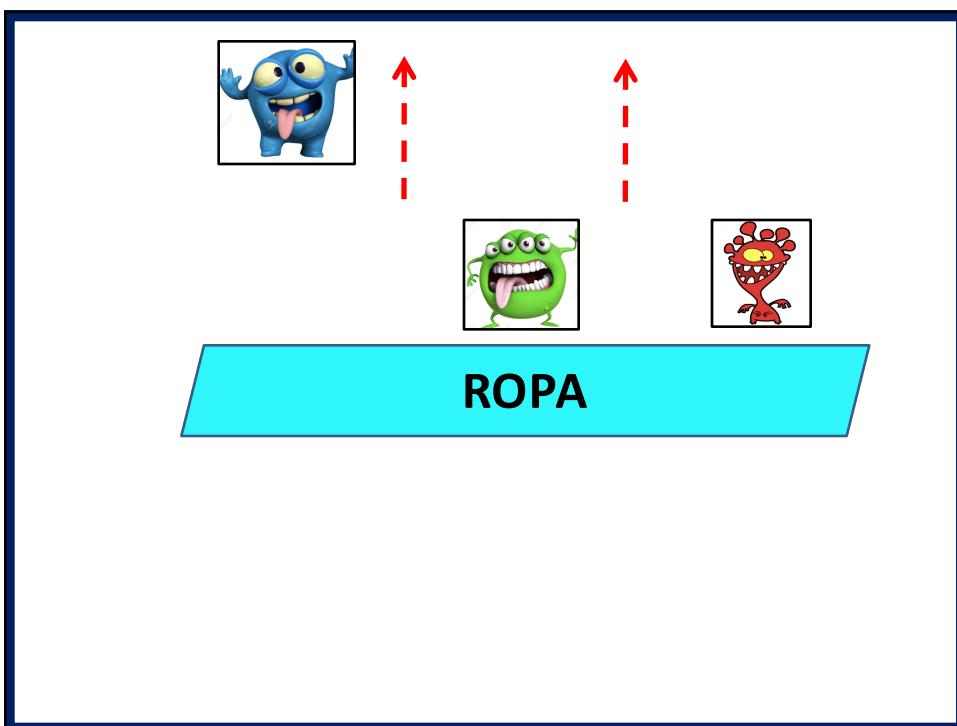
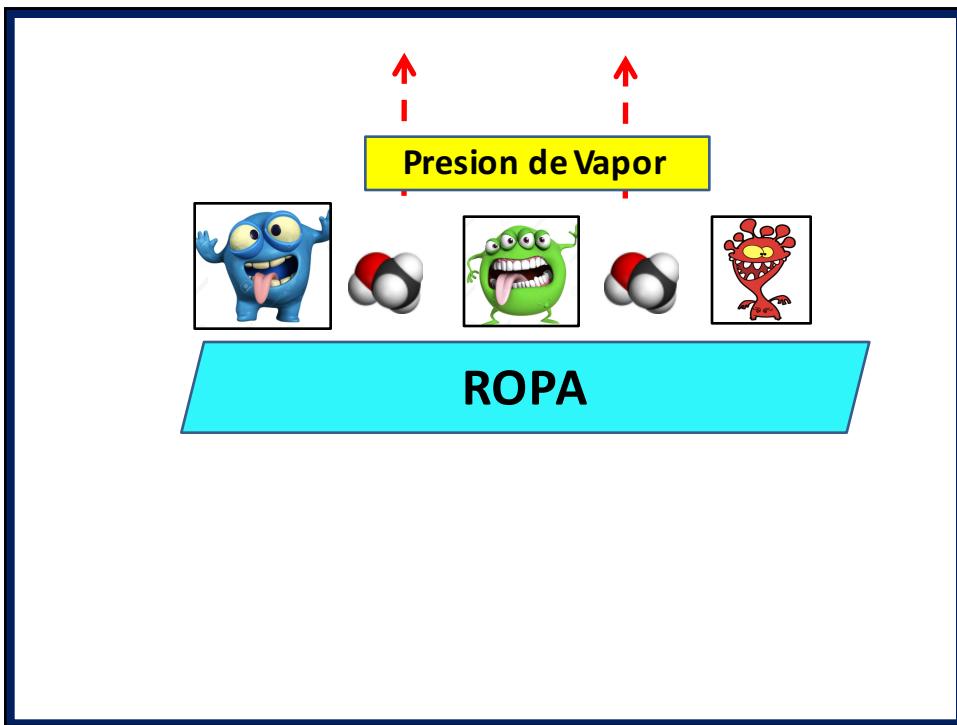


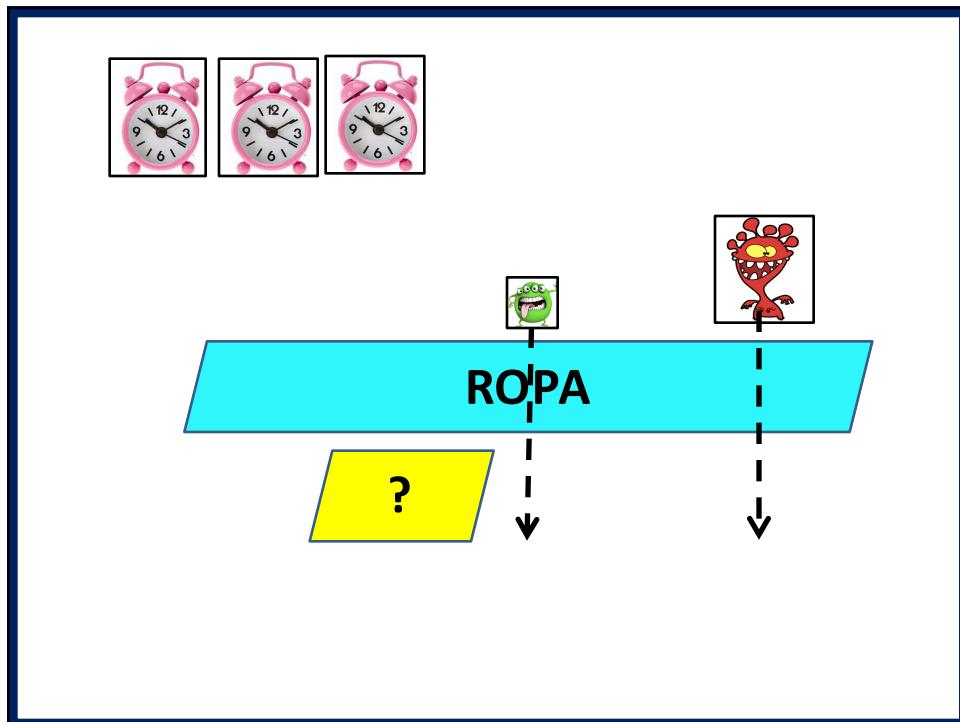
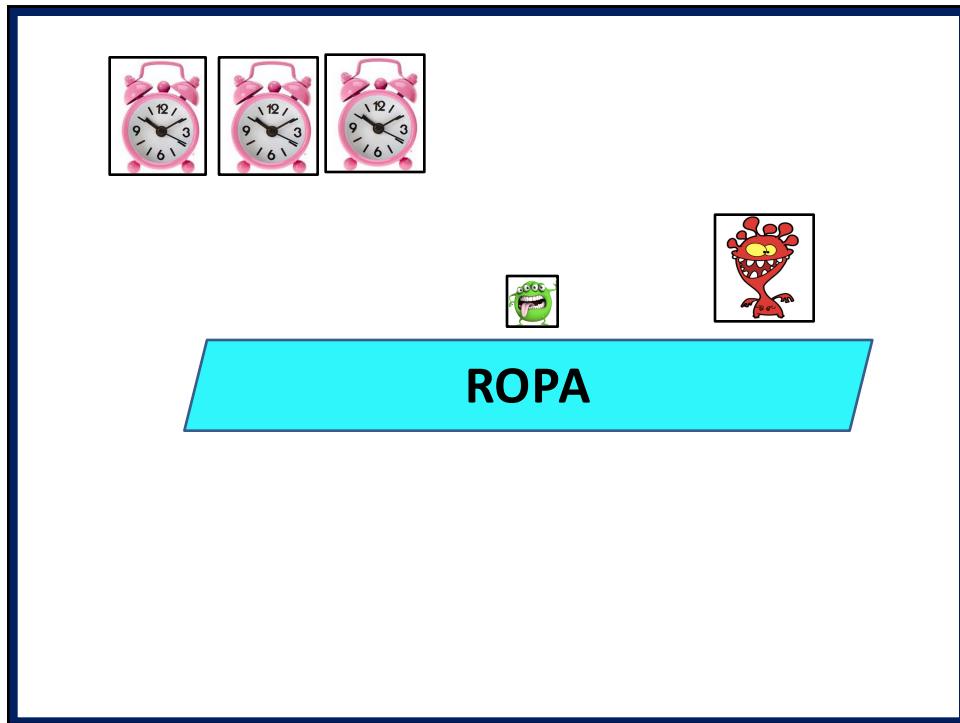
Poca evaporacion  
Poca difusion cutanea

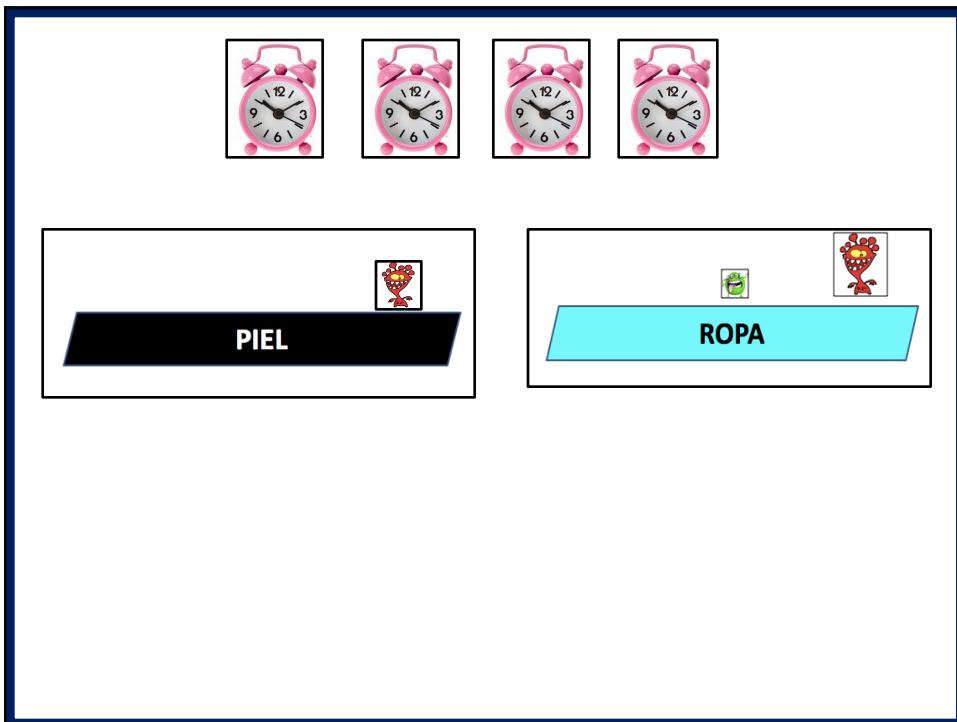
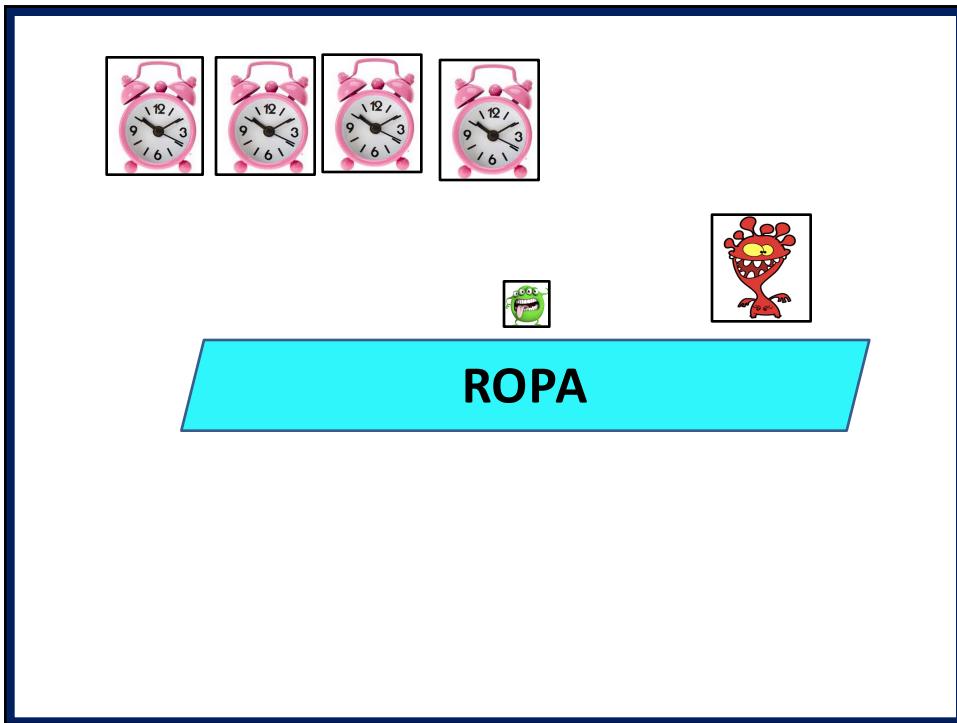
Almizcle

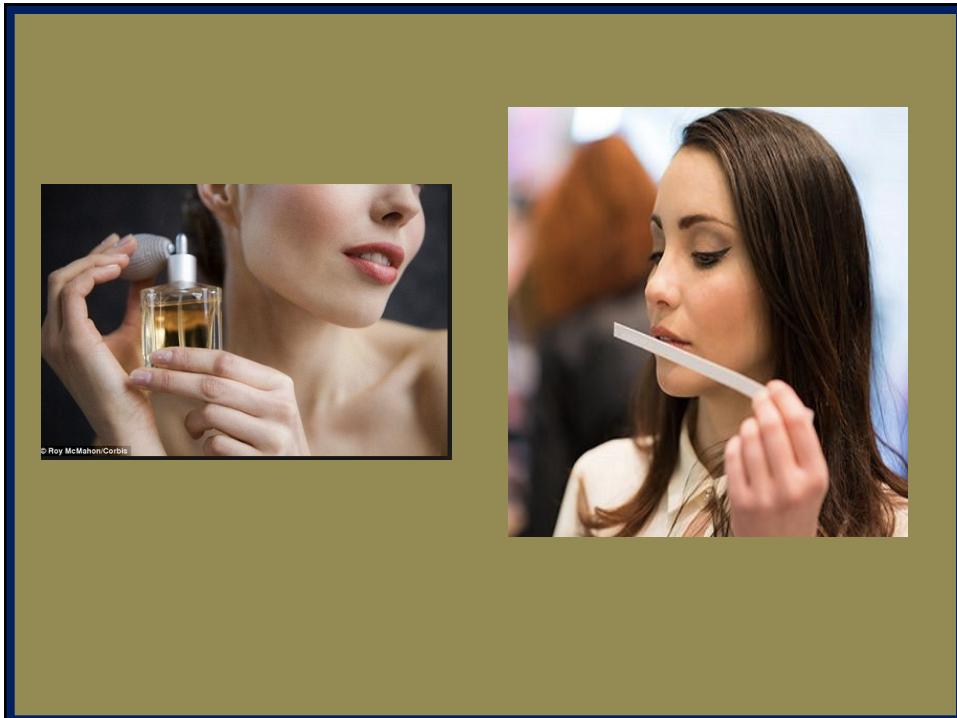


**ROPA**









**Misma Fragancia  
Gel de Ducha**

A graphic design featuring a yellow header box with the text "Misma Fragancia" and "Gel de Ducha". Below the header is a red-bordered frame containing a hand holding a purple shower gel bottle. To the right of the frame are three small, colorful cartoon monster faces: a blue one at the top, a green one in the middle, and a red one at the bottom. All three monster faces have their tongues sticking out.

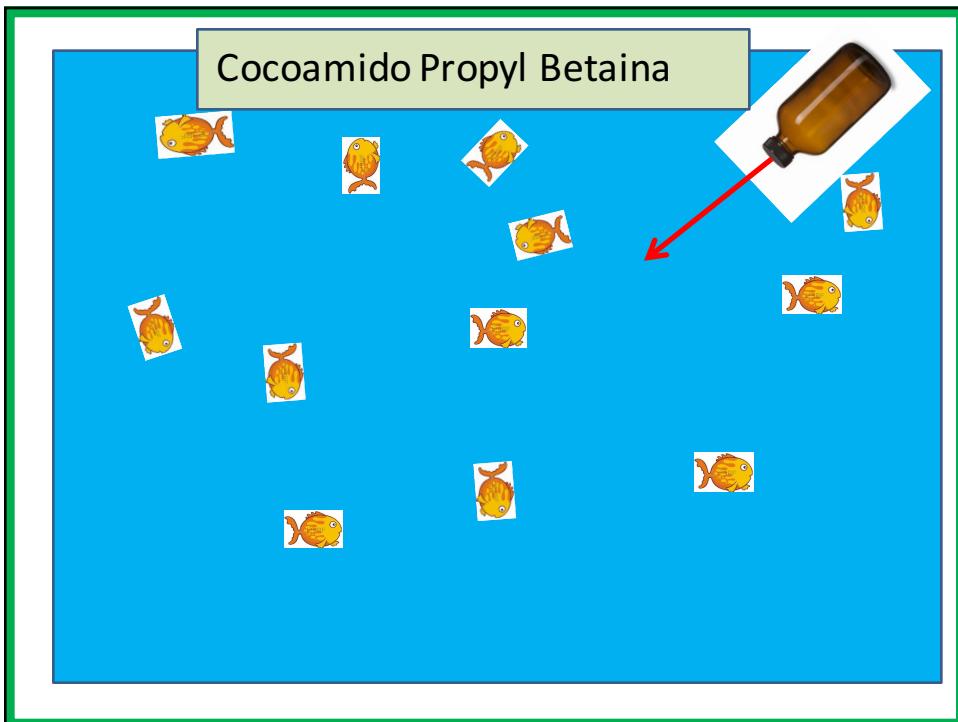
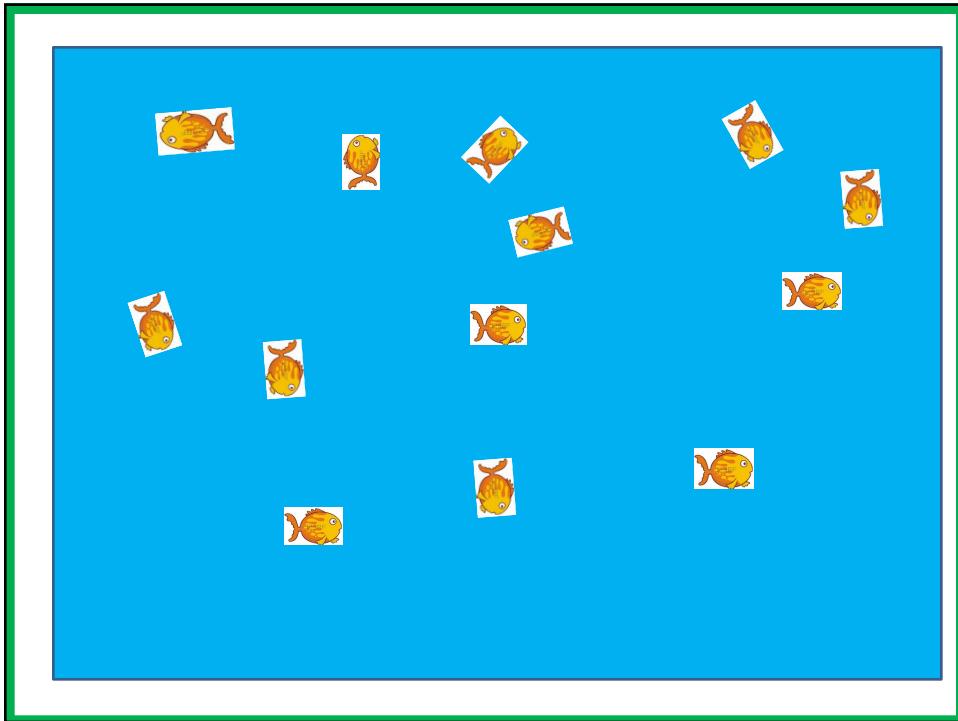
# Tensoactivos

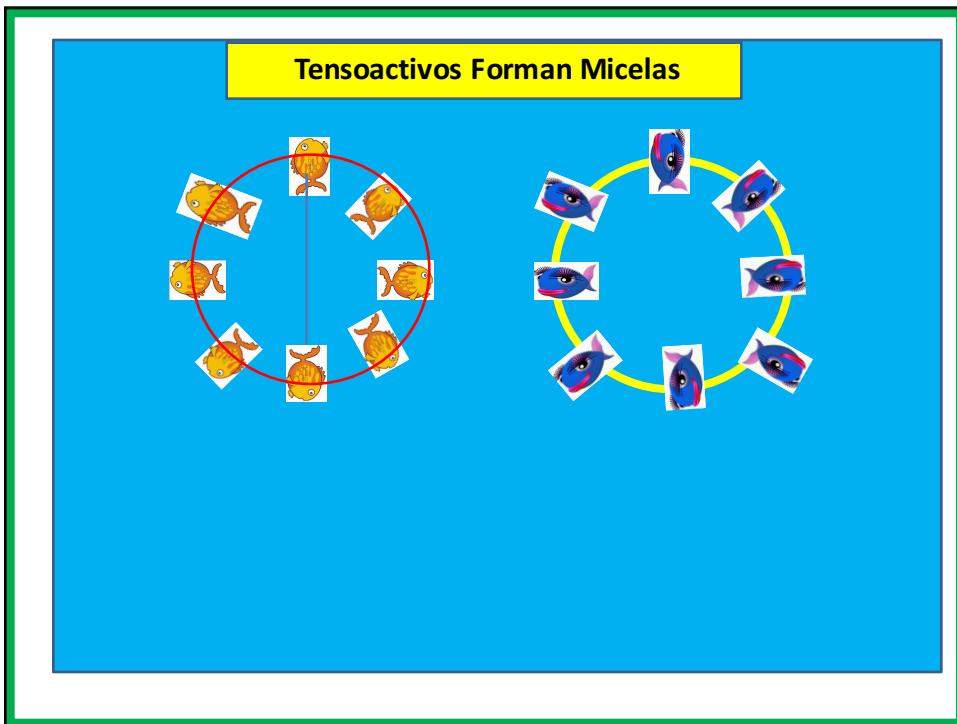
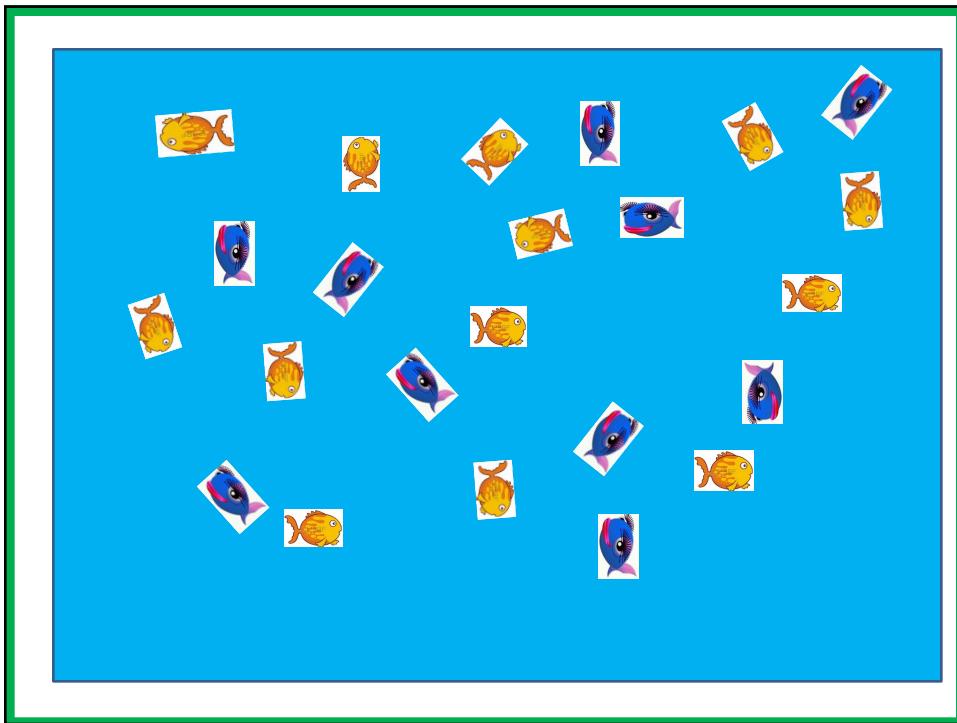
**INGREDIENTS:** Aqua , Sodium Lauryl Sulfate, Sodium Laureth Sulfate, Cocamidopropyl Betaine, Sodium Chloride, Sodium Citrate, Citric Acid, Sodium EDTA

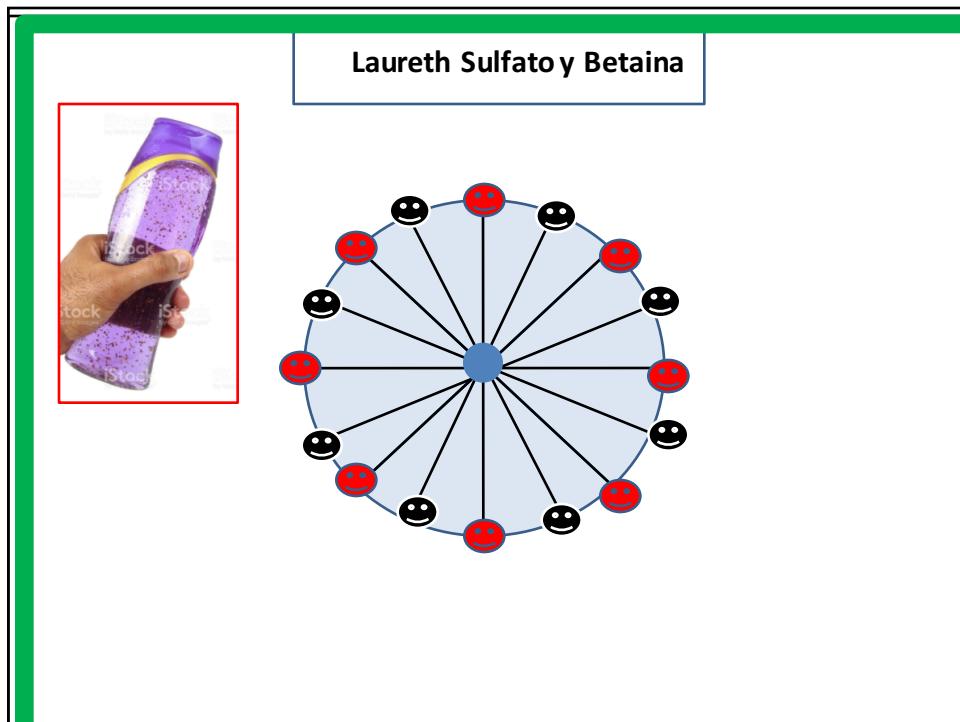


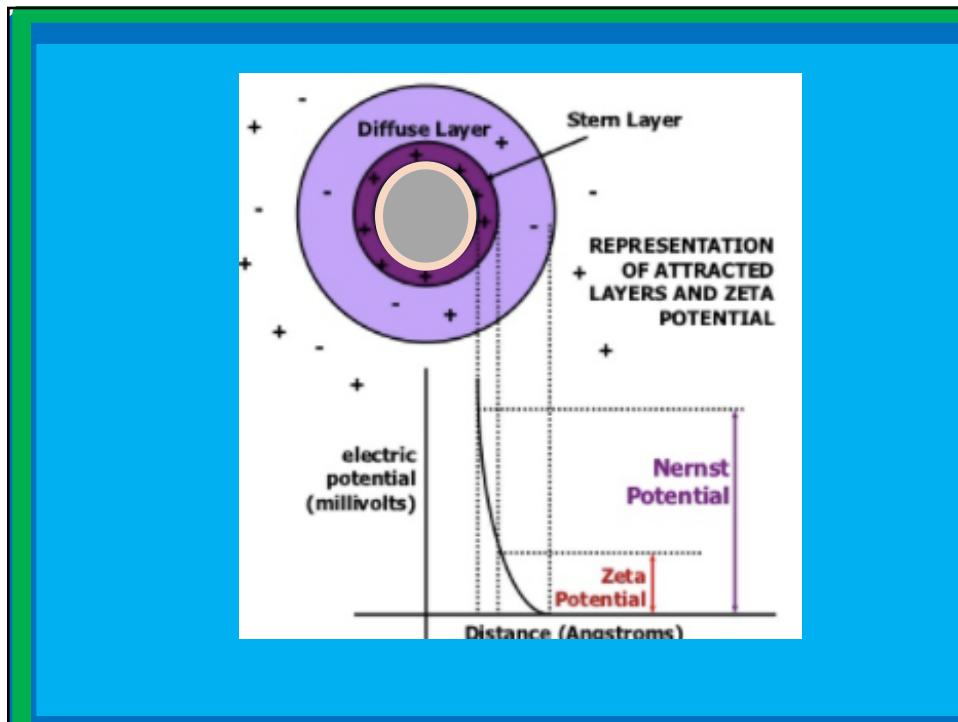
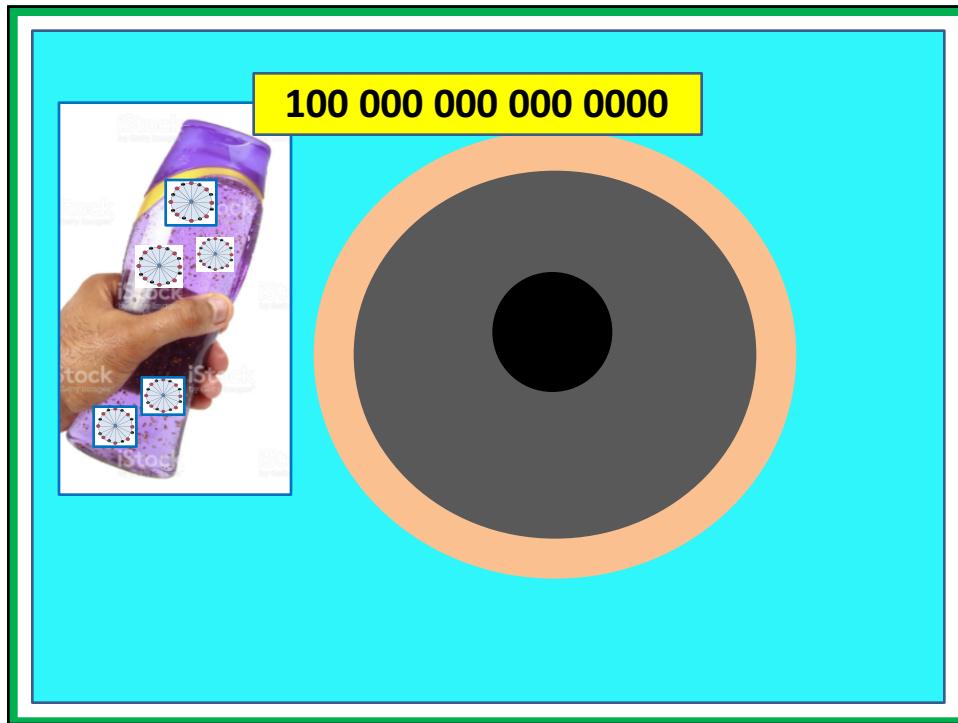
Laureth Sulfato

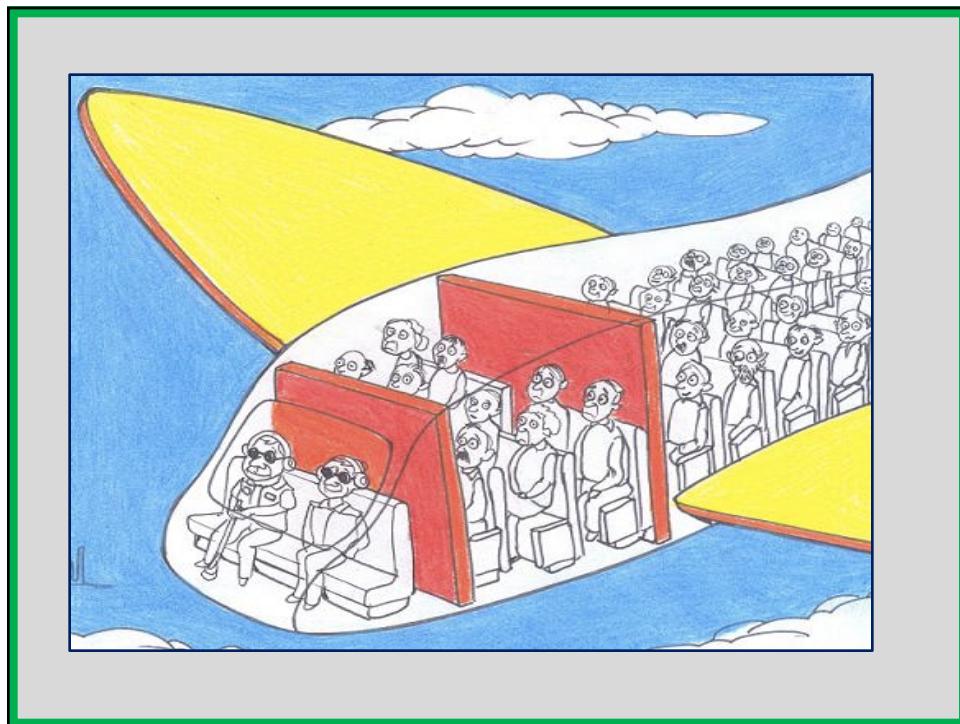
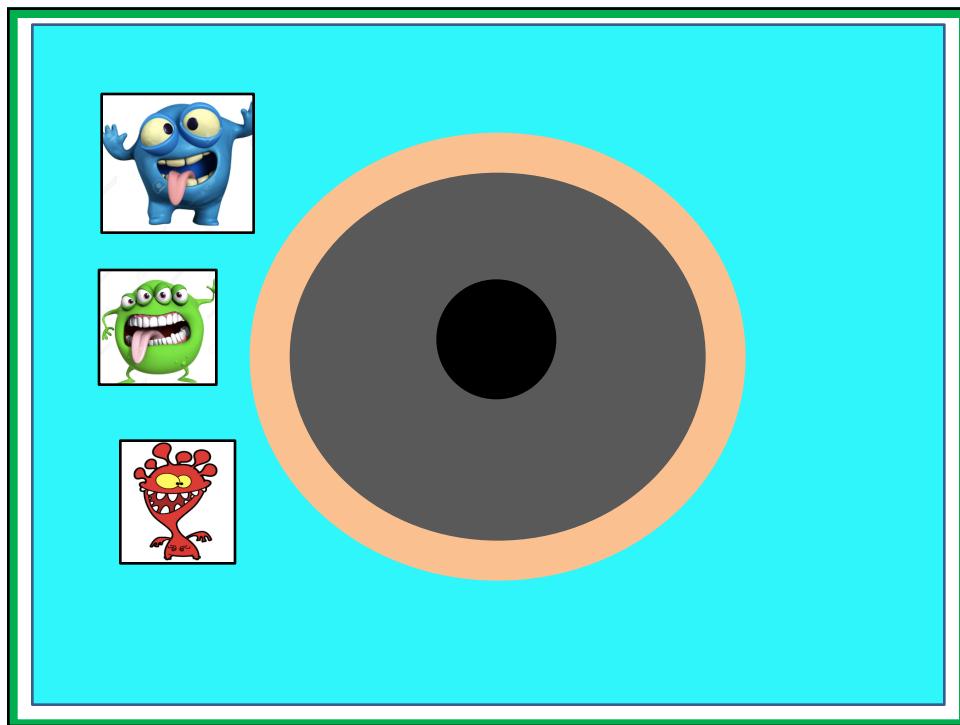


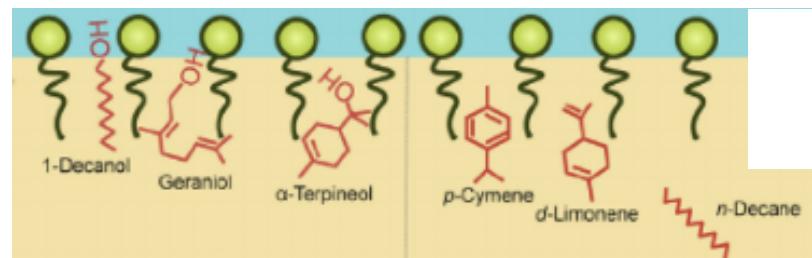
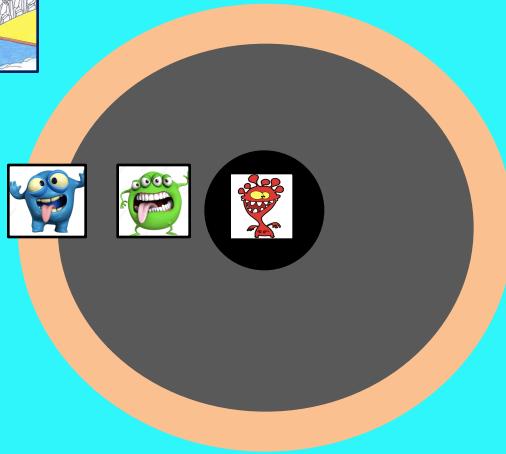
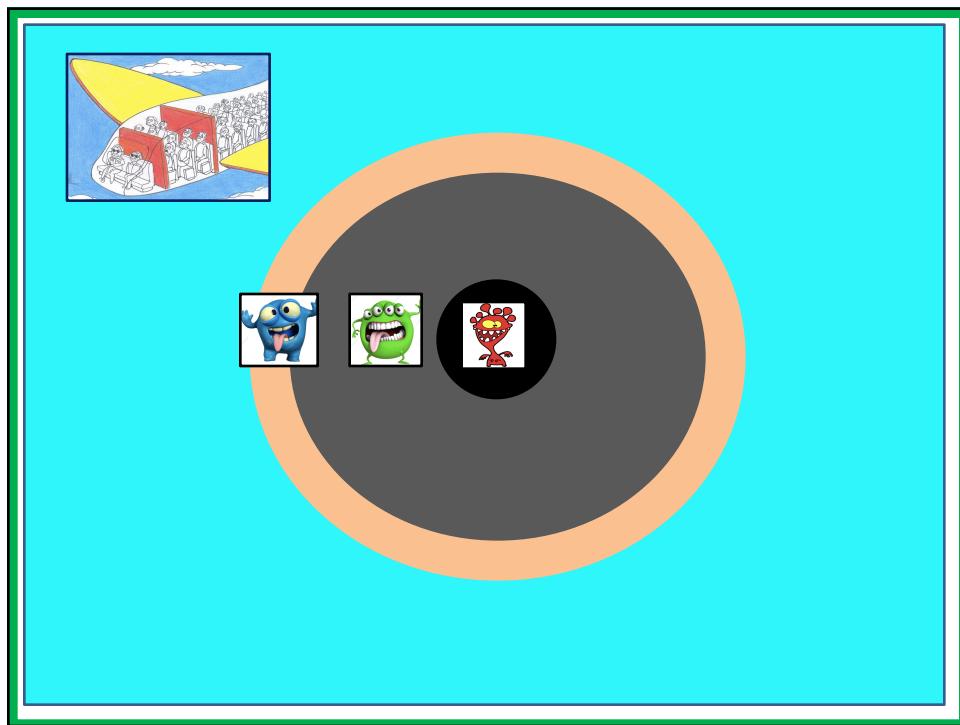


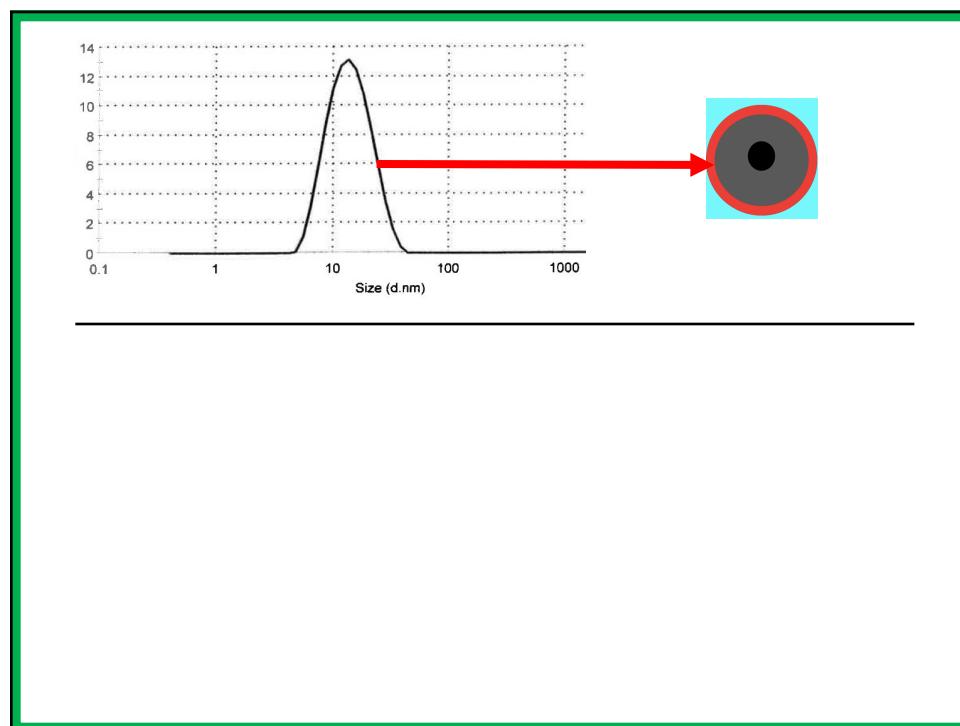
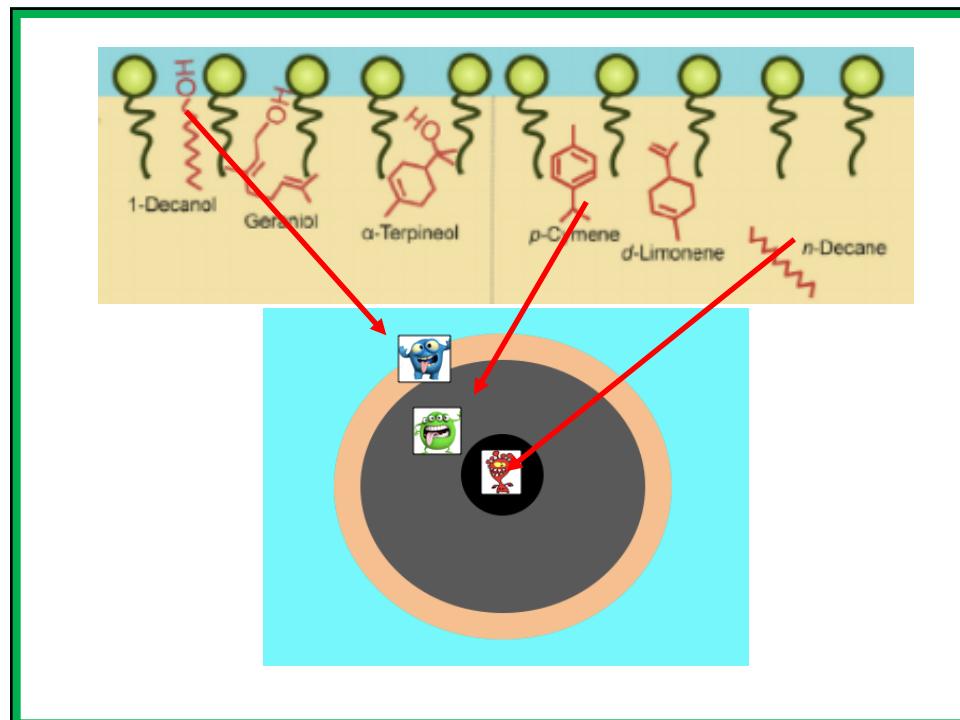


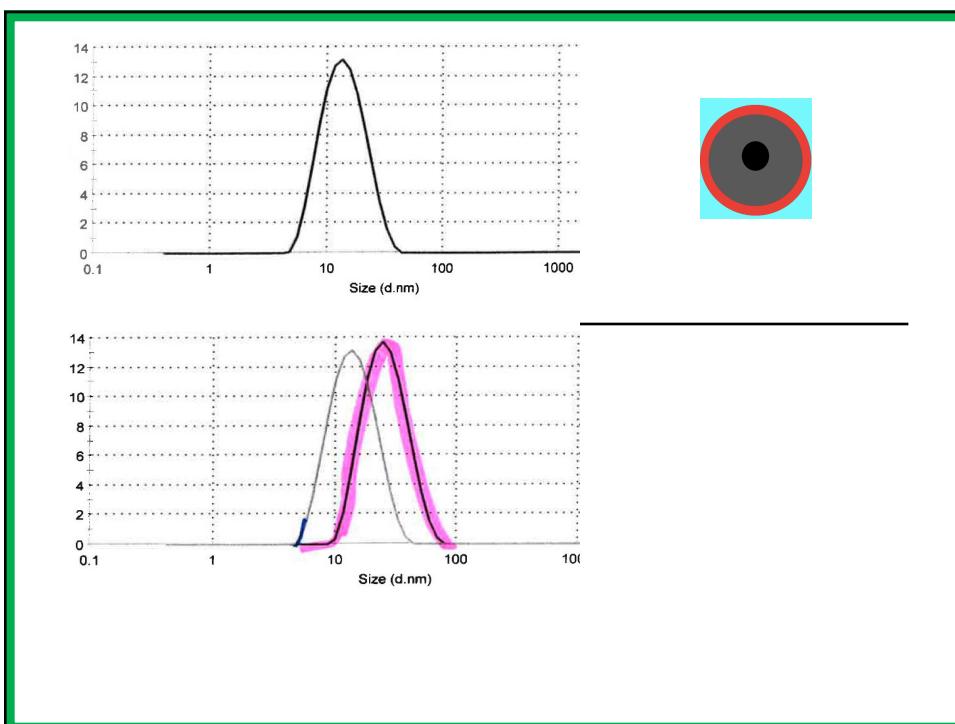
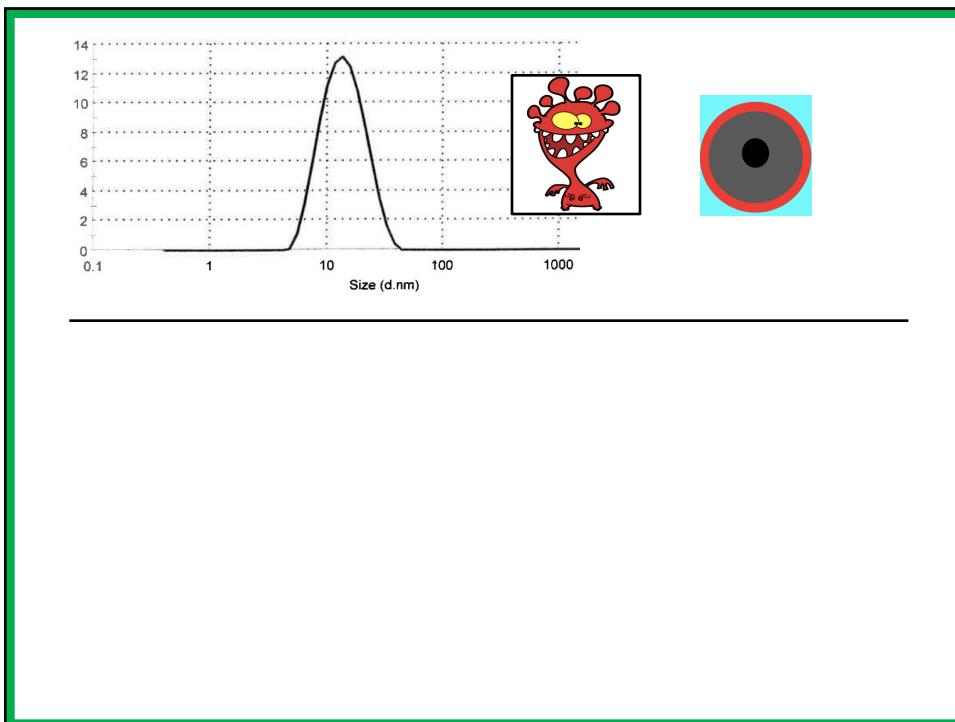


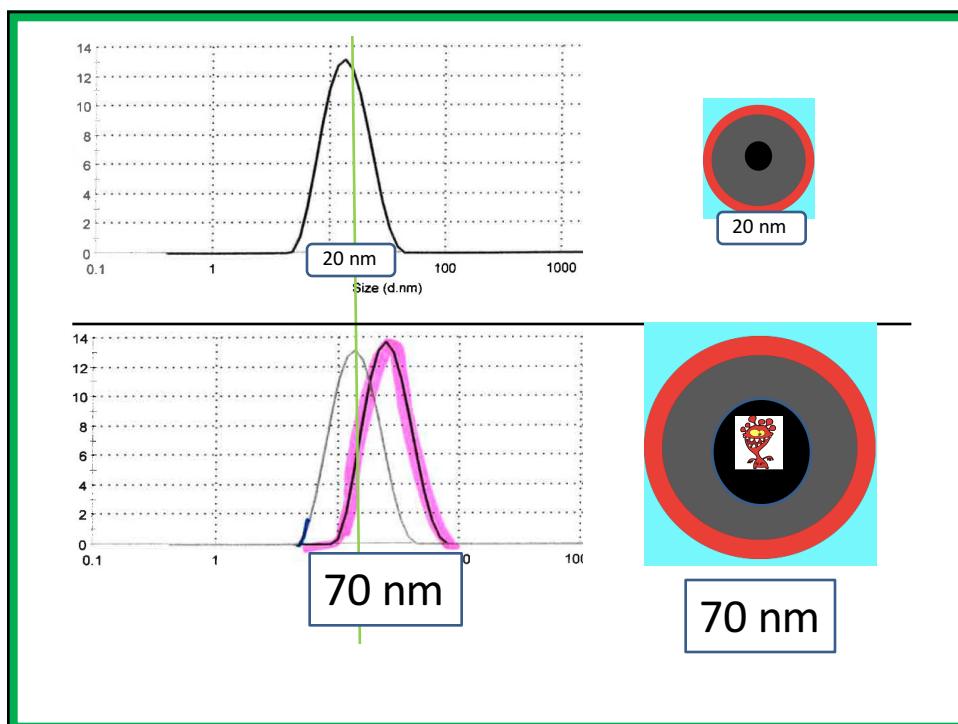
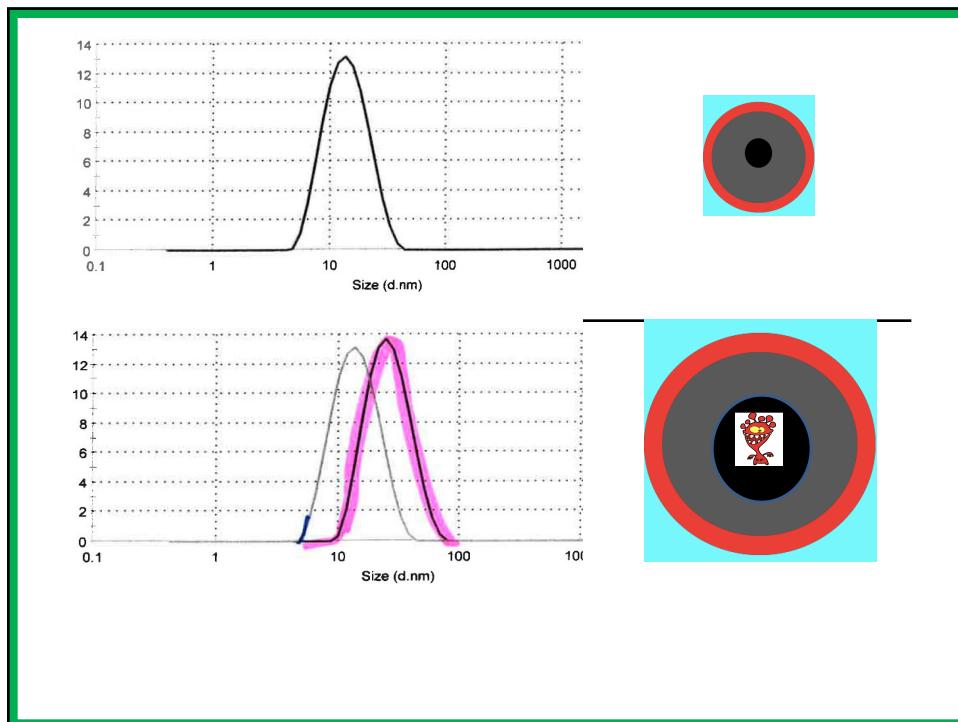


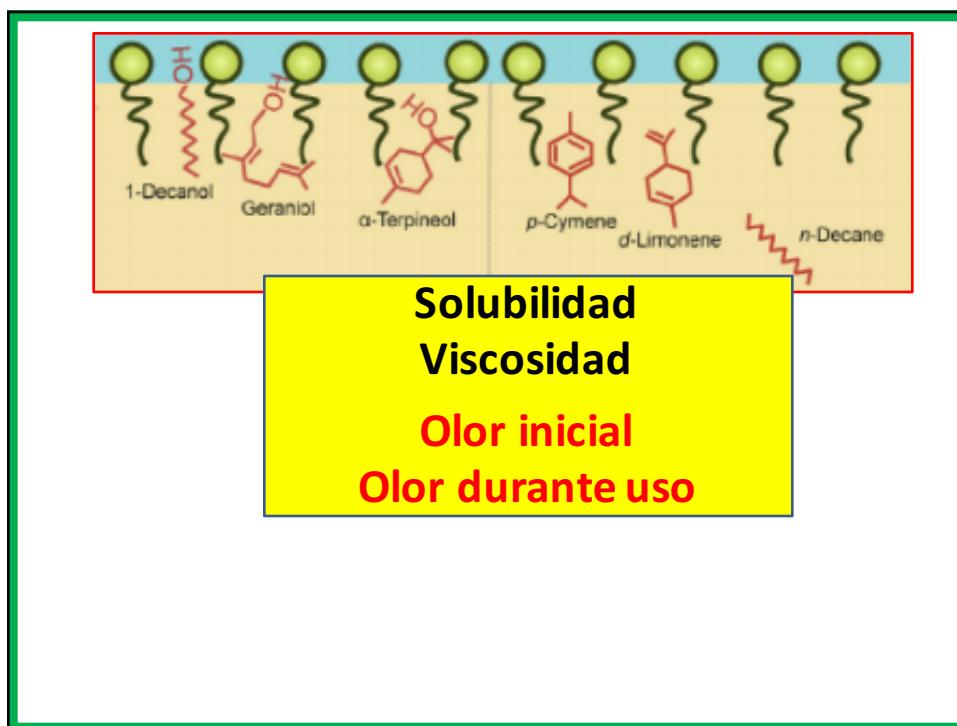
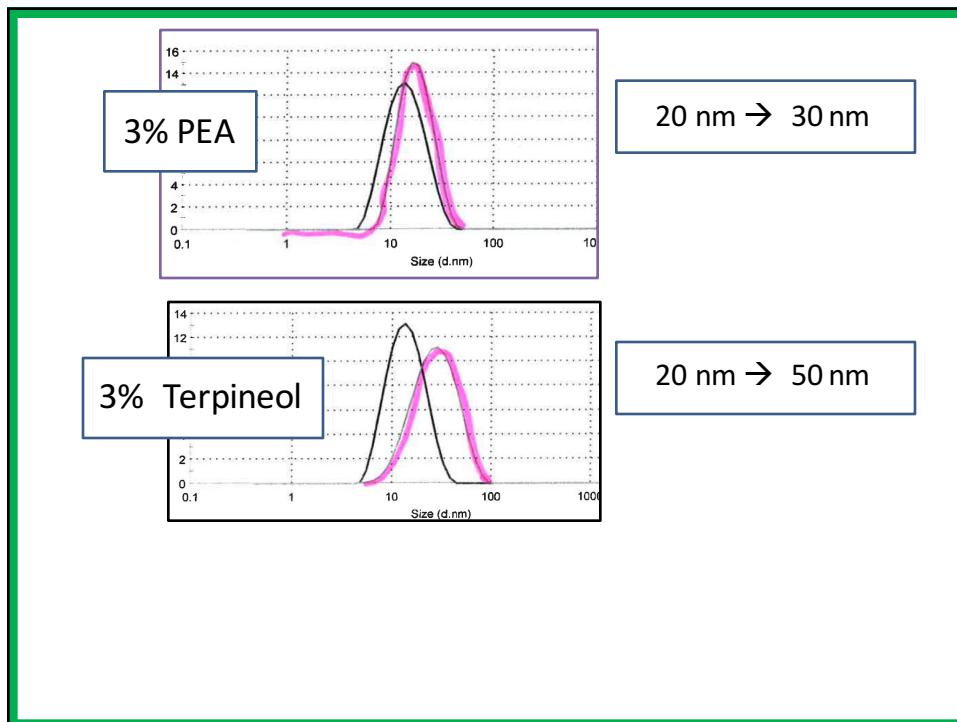


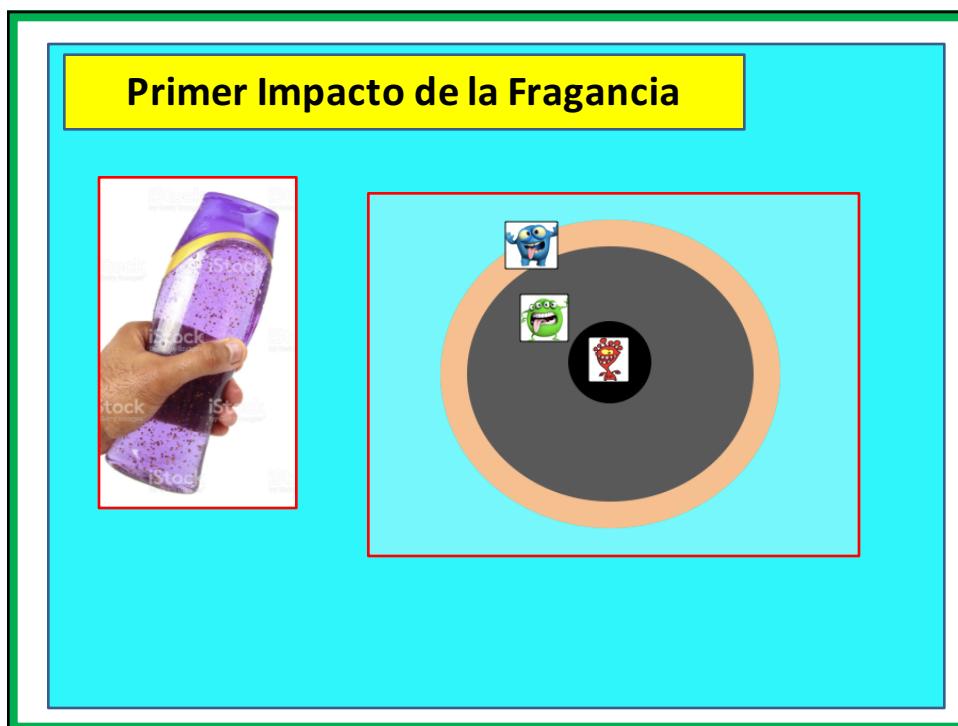












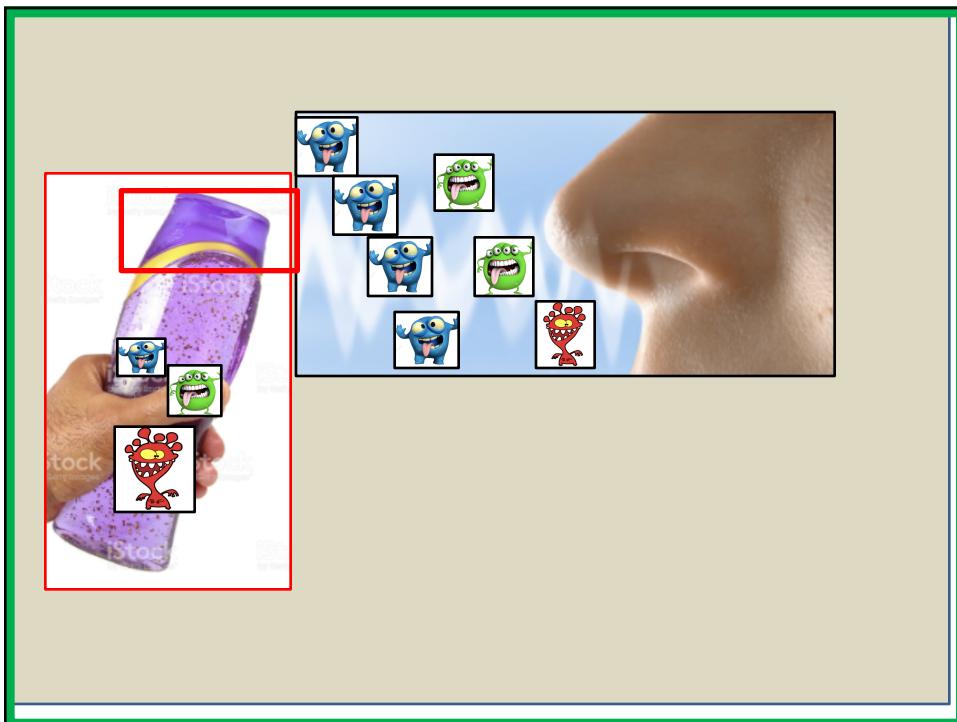
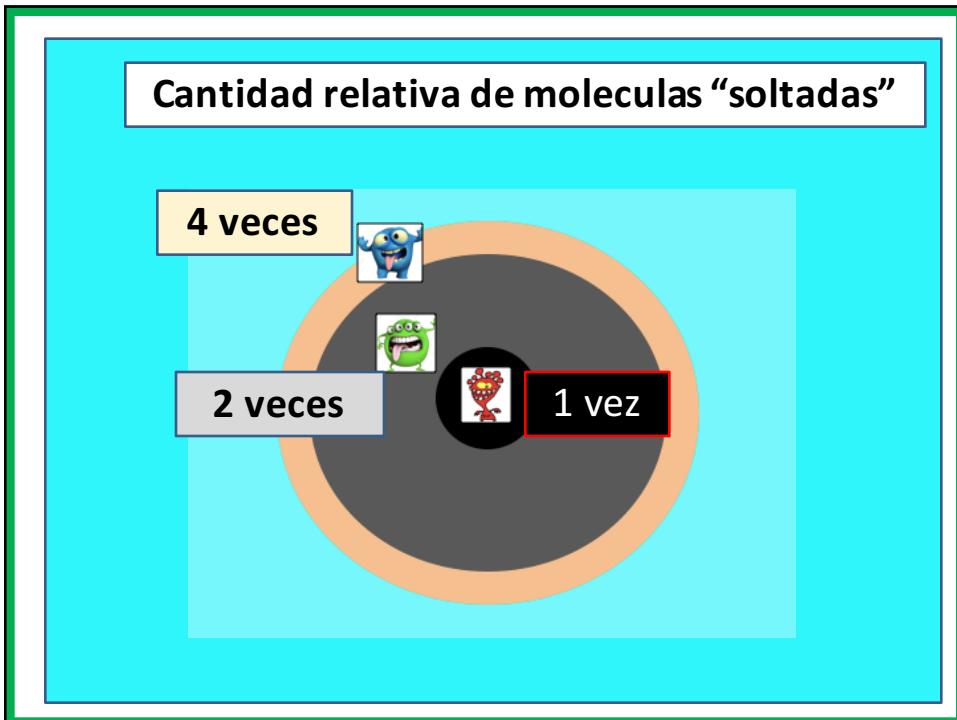
**Primer Impacto de la Fragancia**

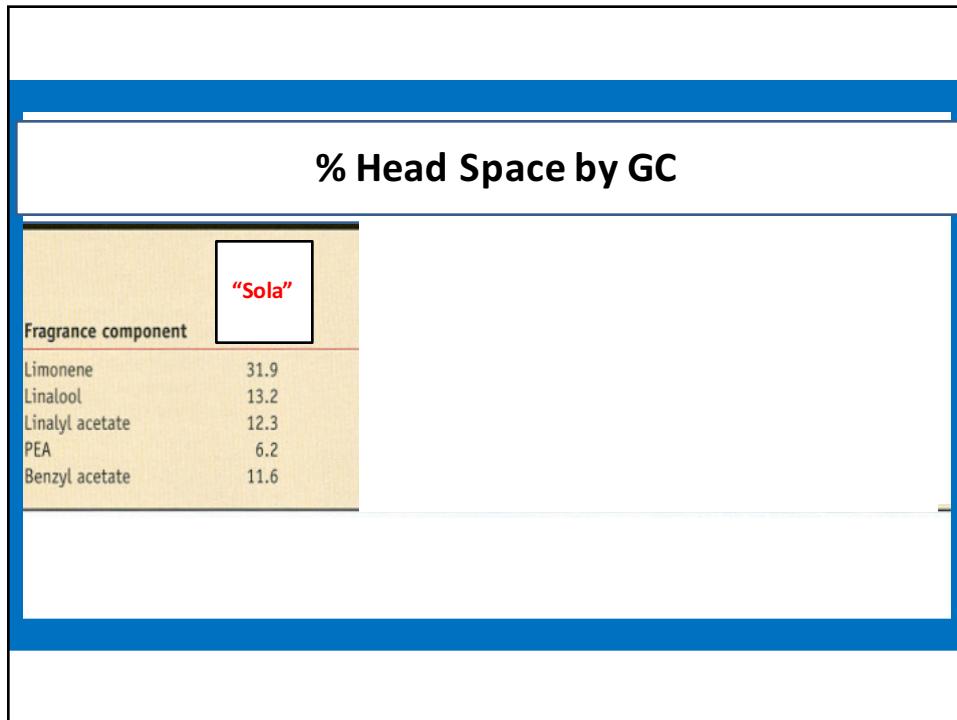
A hand holds a purple bottle of perfume. A red square highlights the spray nozzle. To the right is a close-up of a nose with sound waves emanating from it, symbolizing fragrance impact.

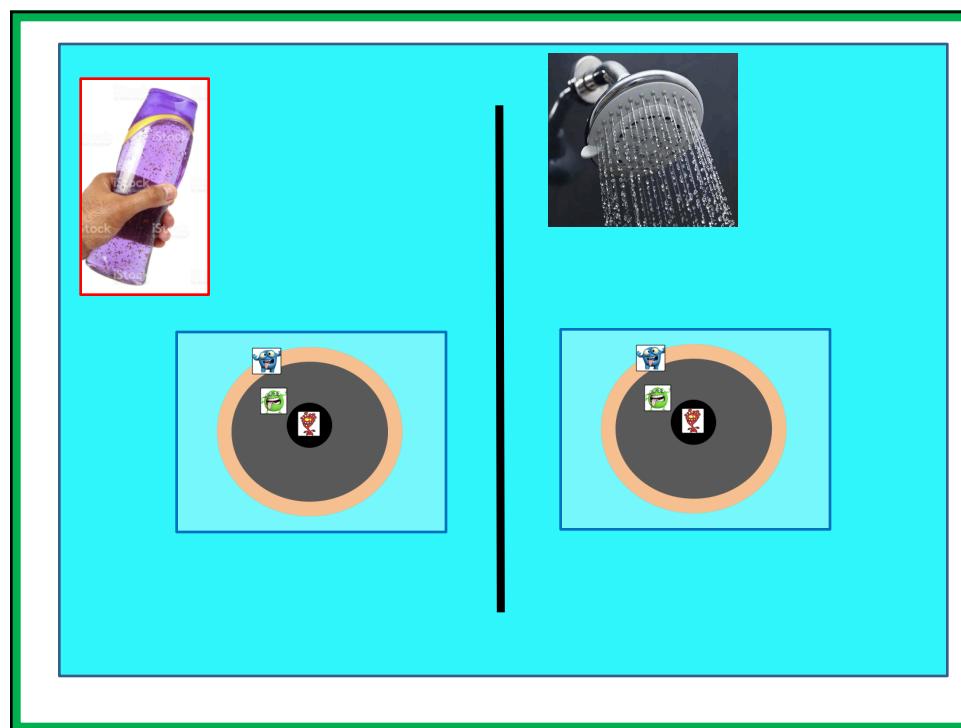
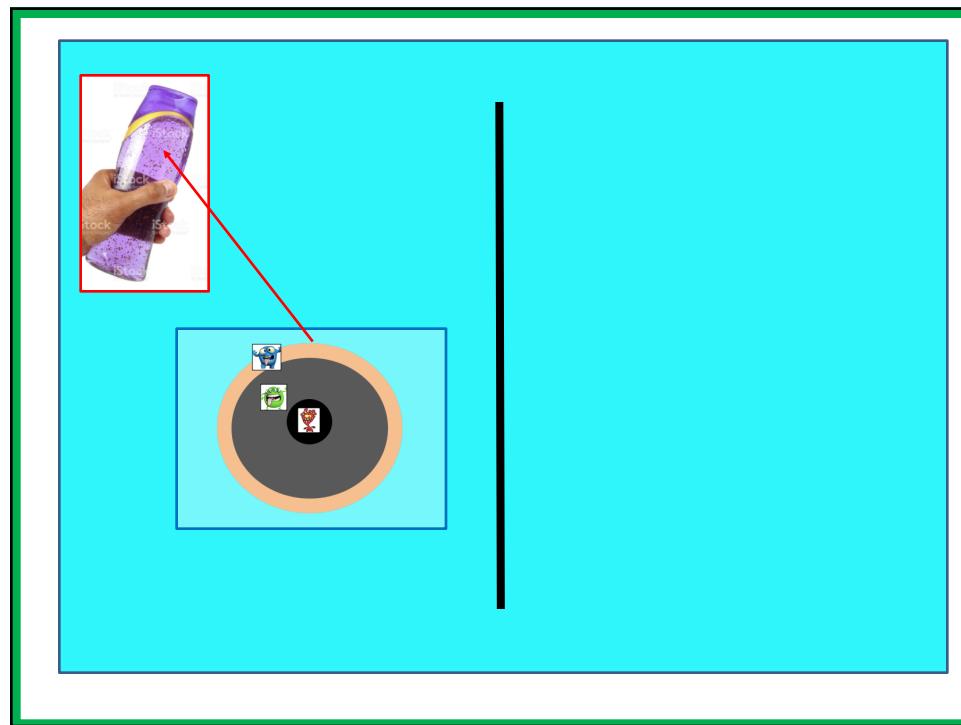
**Primer Impacto de la Fragancia**

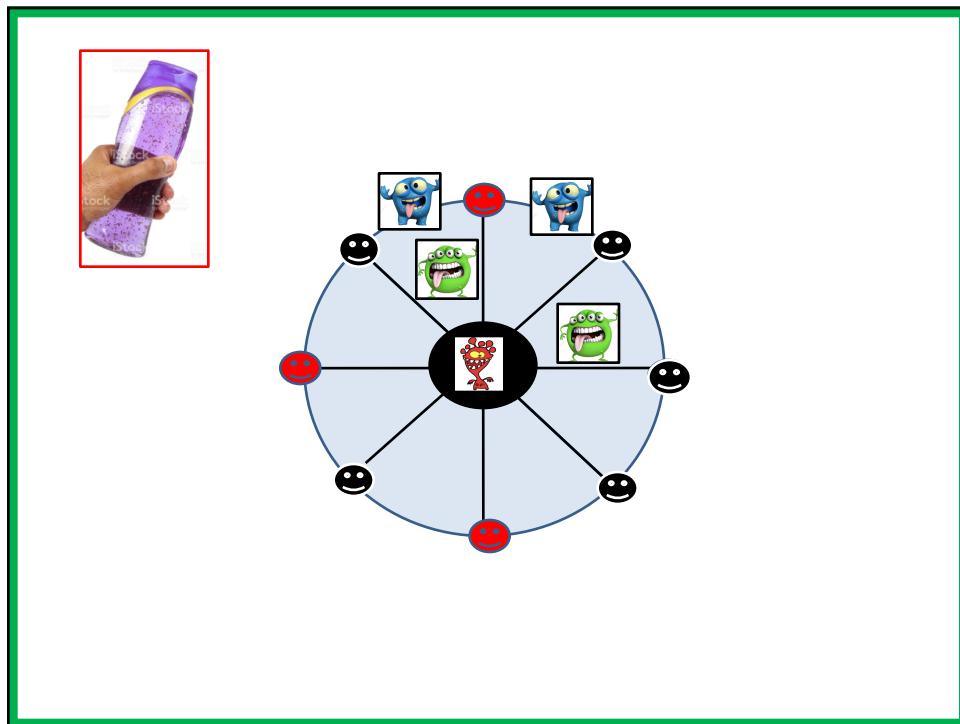
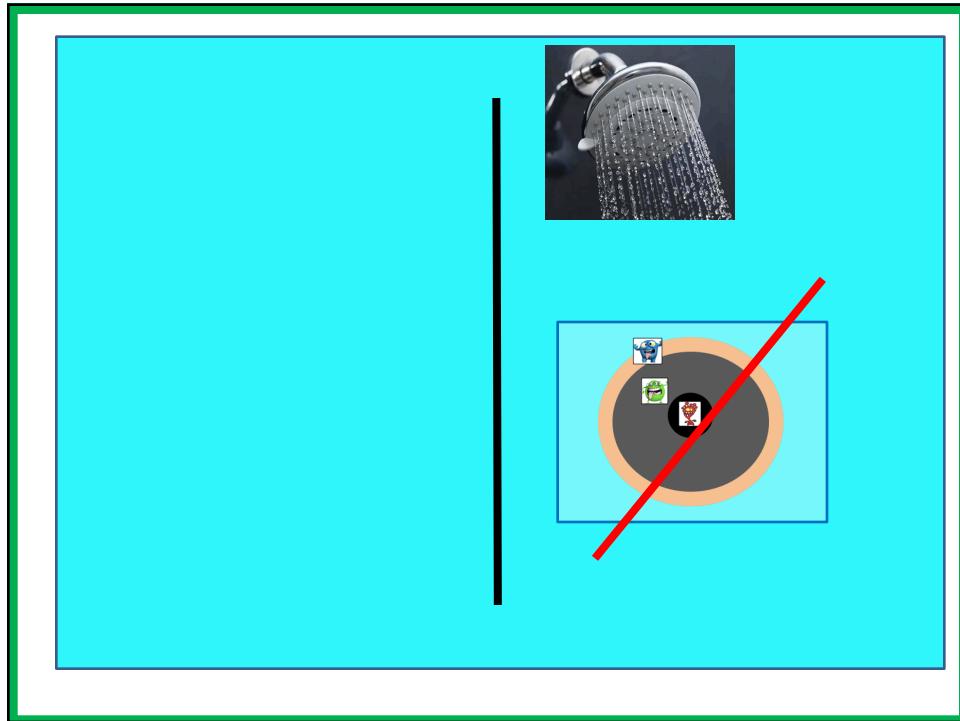
**Cantidad relativa de moléculas “soltadas”**

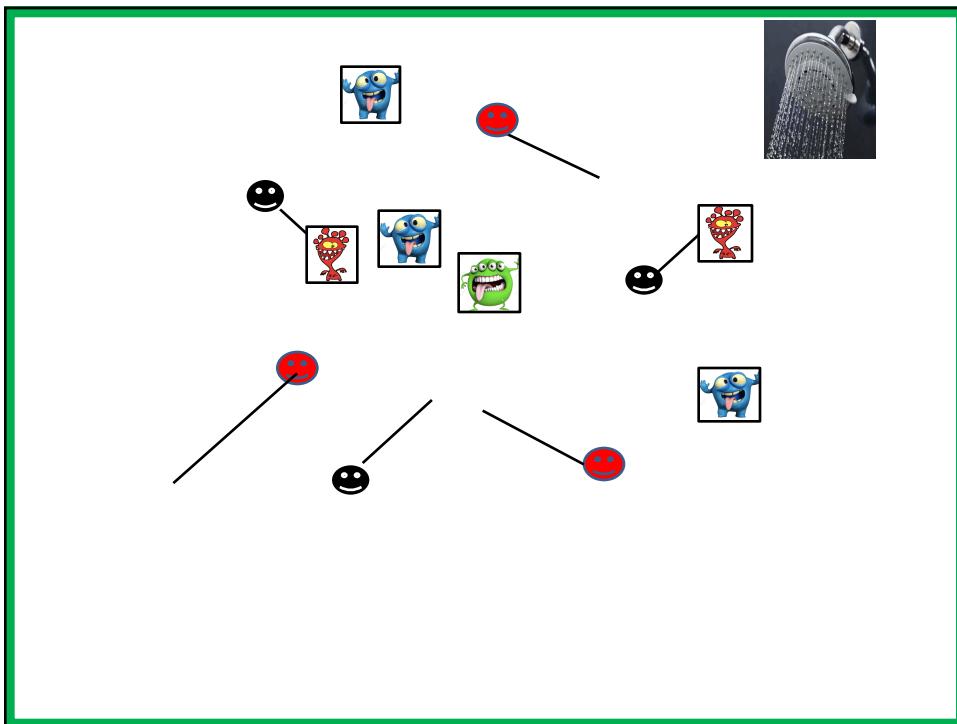
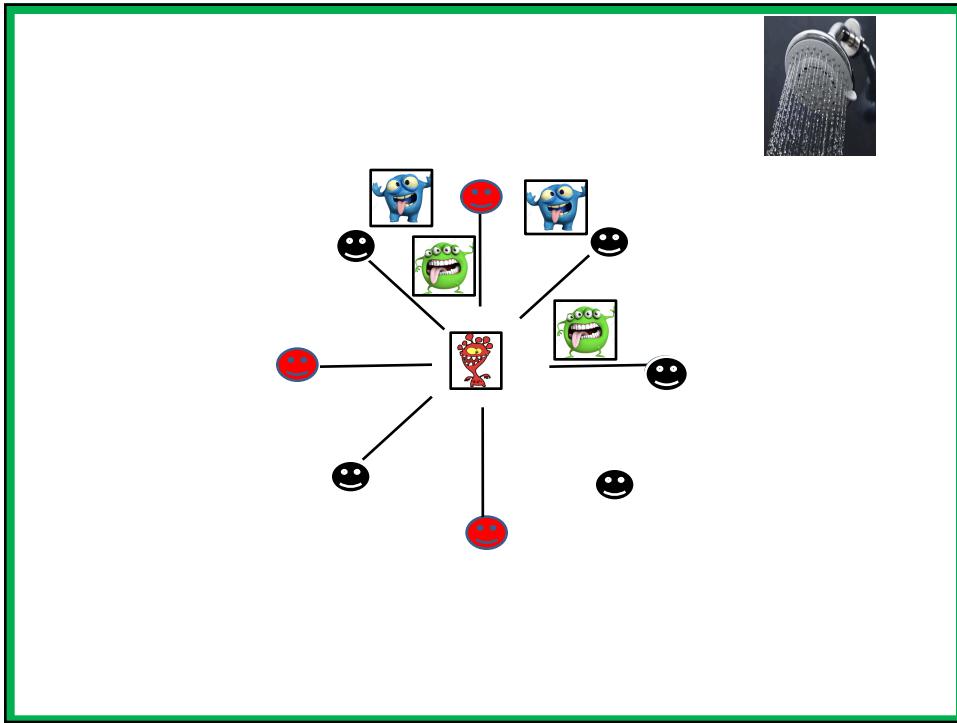
A target-like circle with concentric rings. Inside the innermost ring are three small cartoon characters: a blue monster, a green monster, and a red heart. This illustrates the relative number of molecules released from different sources.

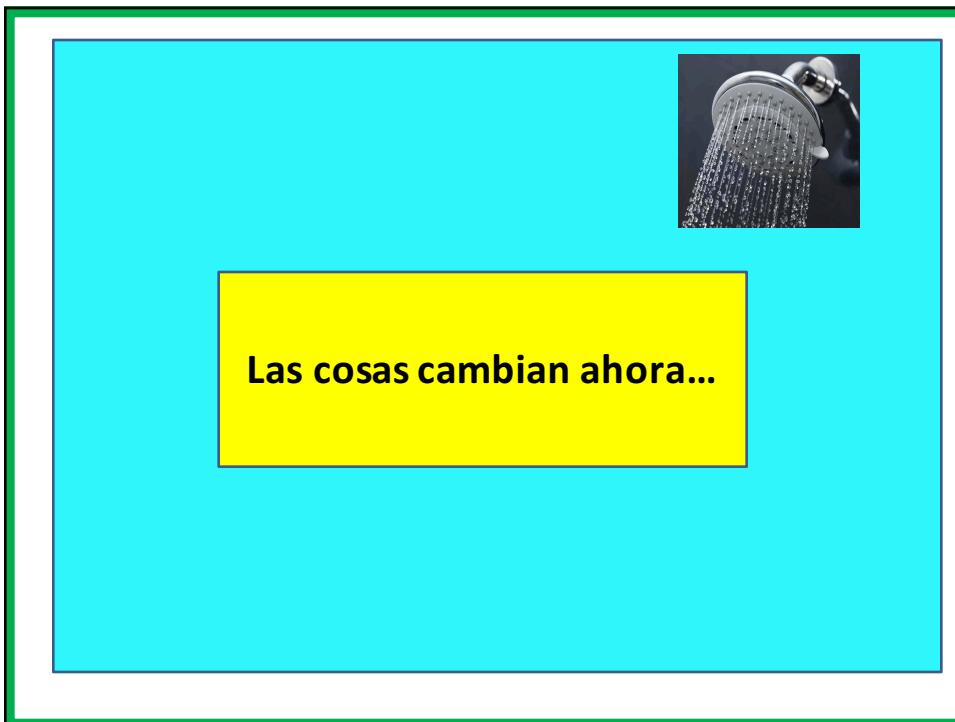
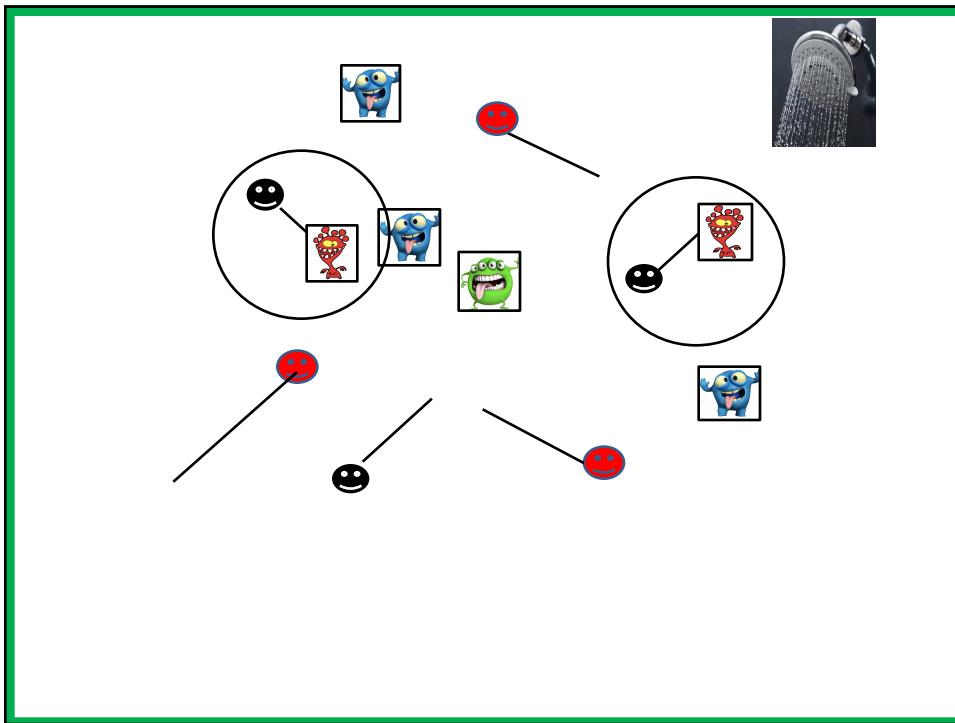












$$PBI = \frac{\phi - 1.4 / CMC}{K}$$

$\phi$ =oil/water partition coefficient of selected perfume or perfume components of a mixture;

CMC=critical micellization concentration (wt/wt) of surfactant system;

K=volatility constant of perfume or perfume components of the mixture from the continuous phase

$$PBI = \frac{\phi - 1.4 / CMC}{K}$$

$\phi$ =oil/wa  
perfum

CMC=cr  
factant

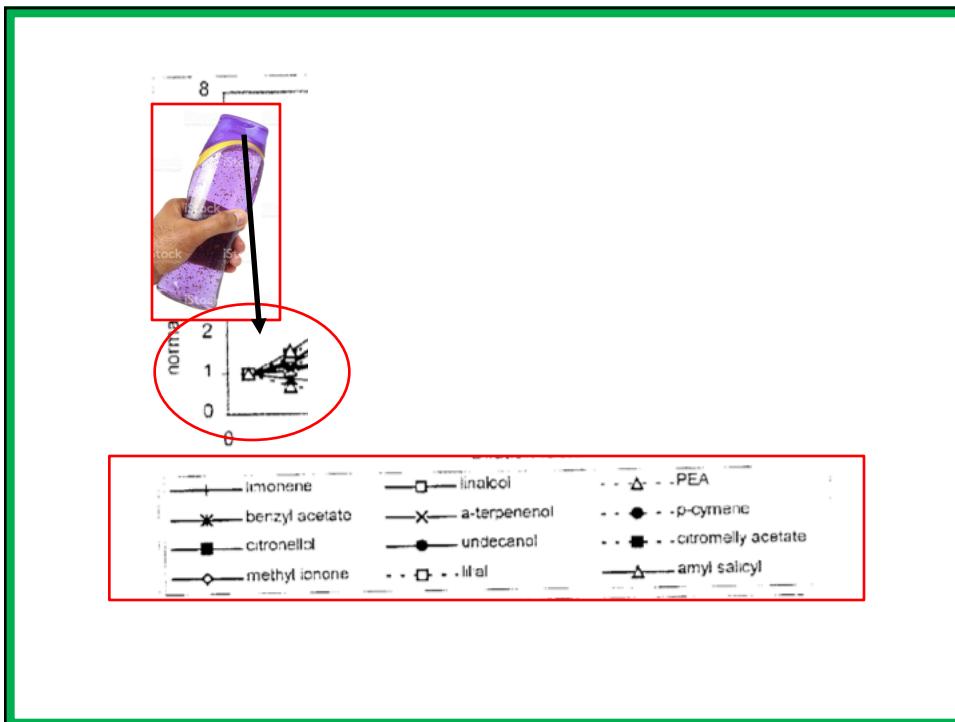
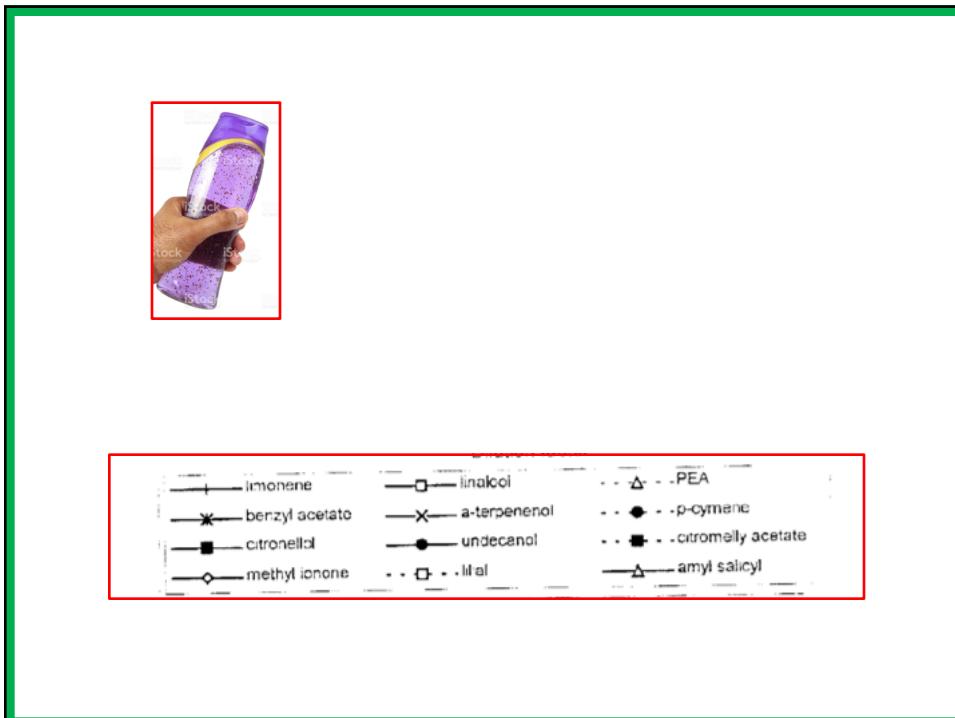
K=volati  
of the mi

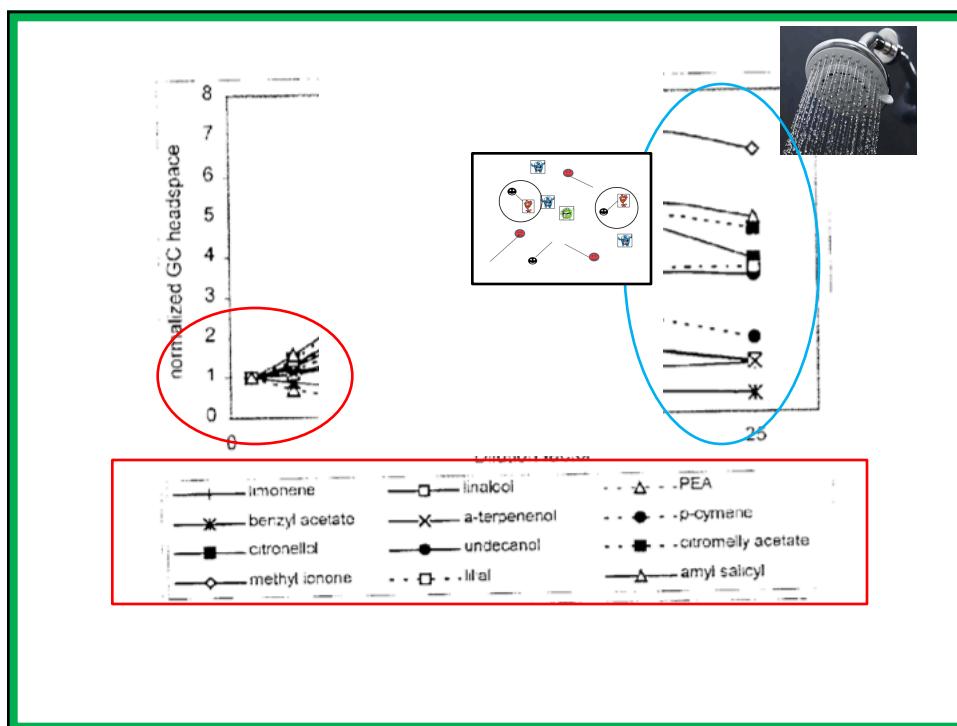
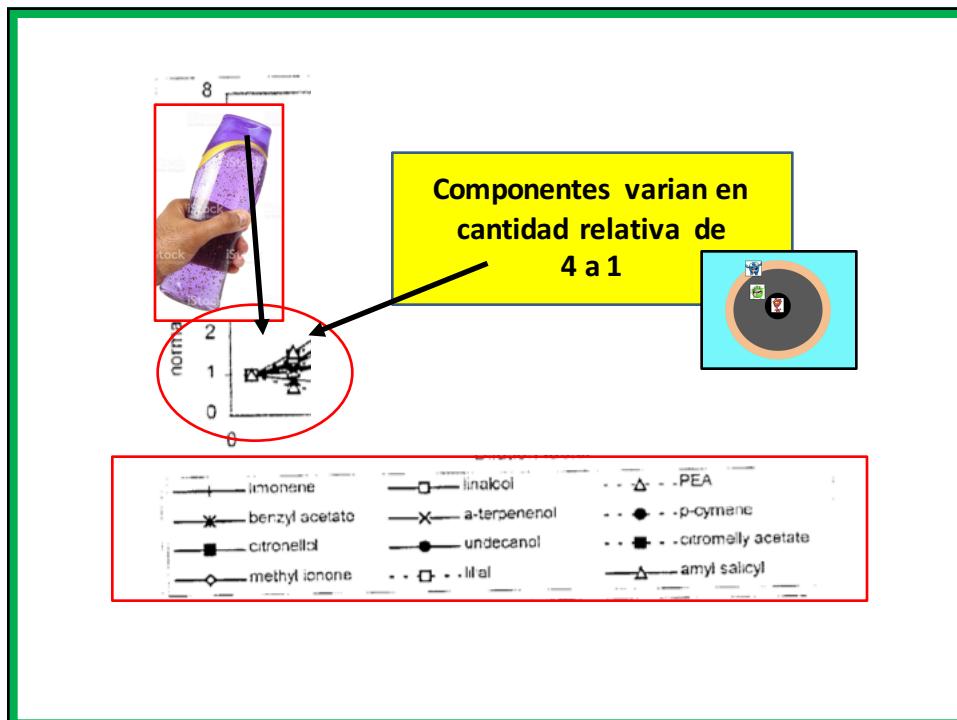
**Volatilidad del perfume  
Solubilidad en agua  
Tipo de formulacion**

perfume or  
erfume or

(wt) of sur  
components

mixture from the continuous phase





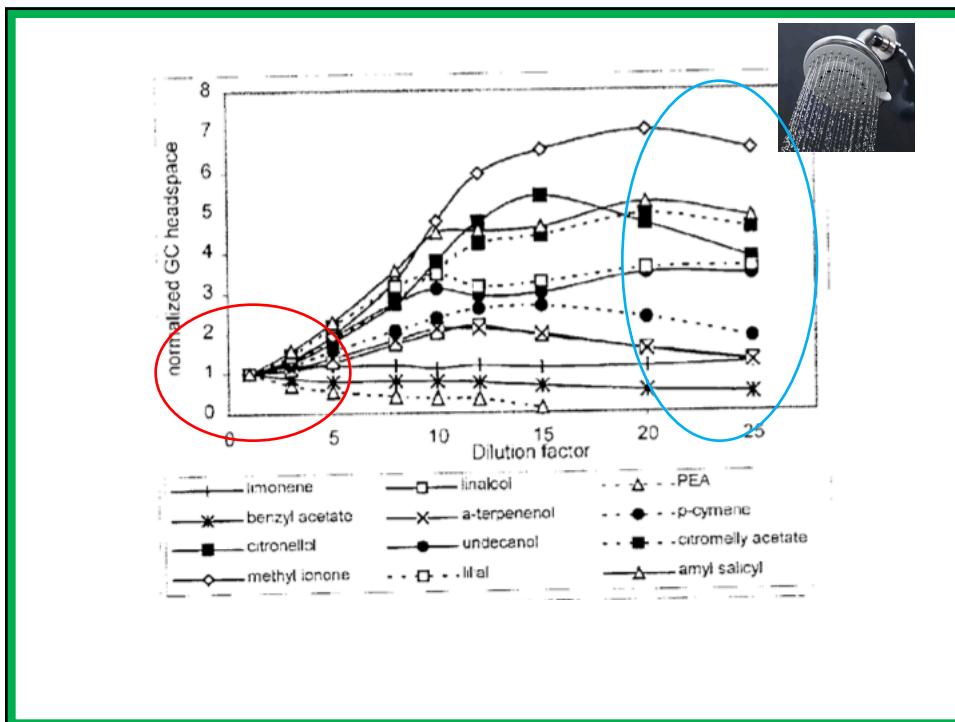
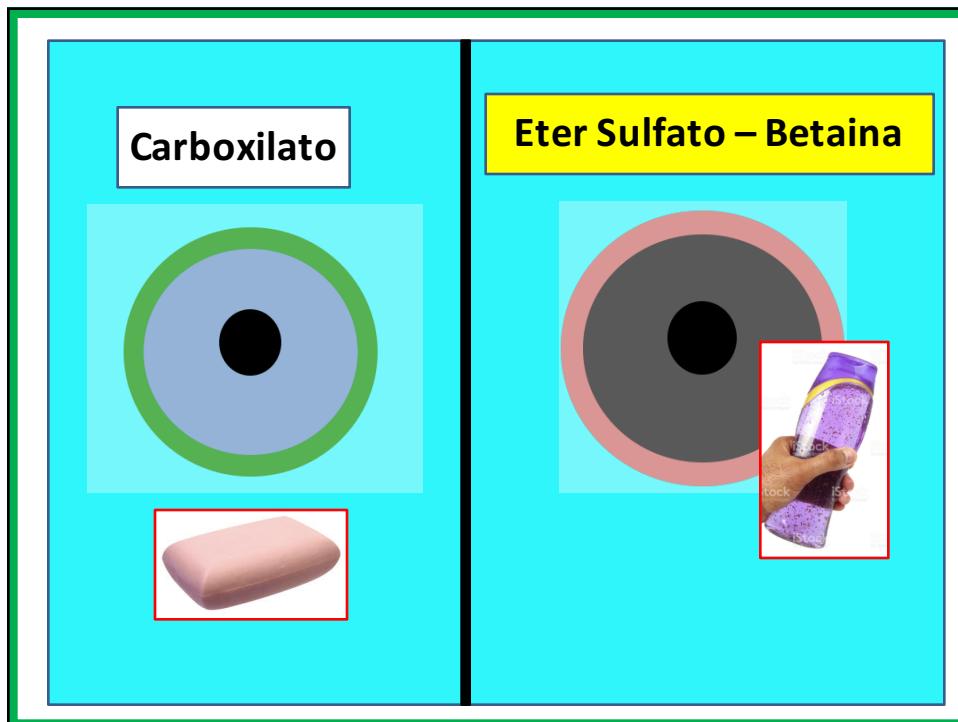
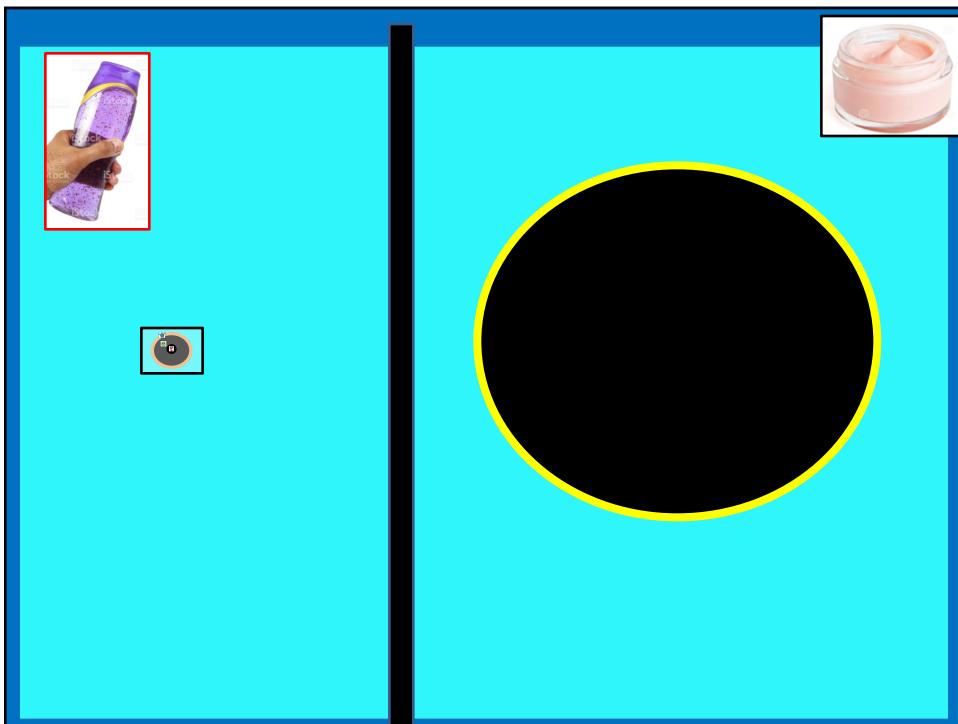
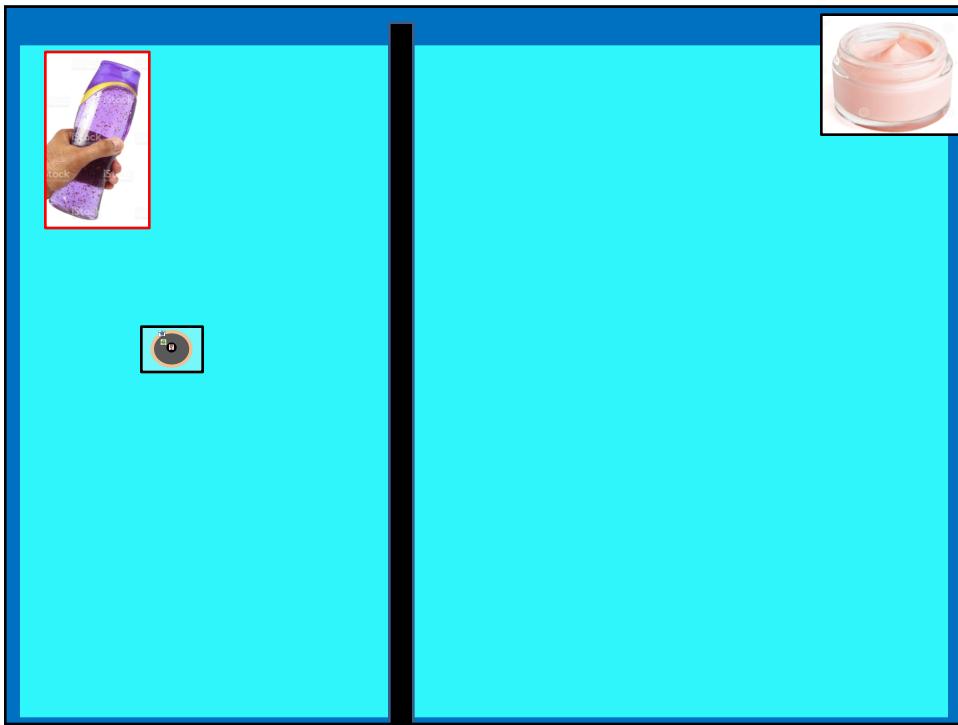


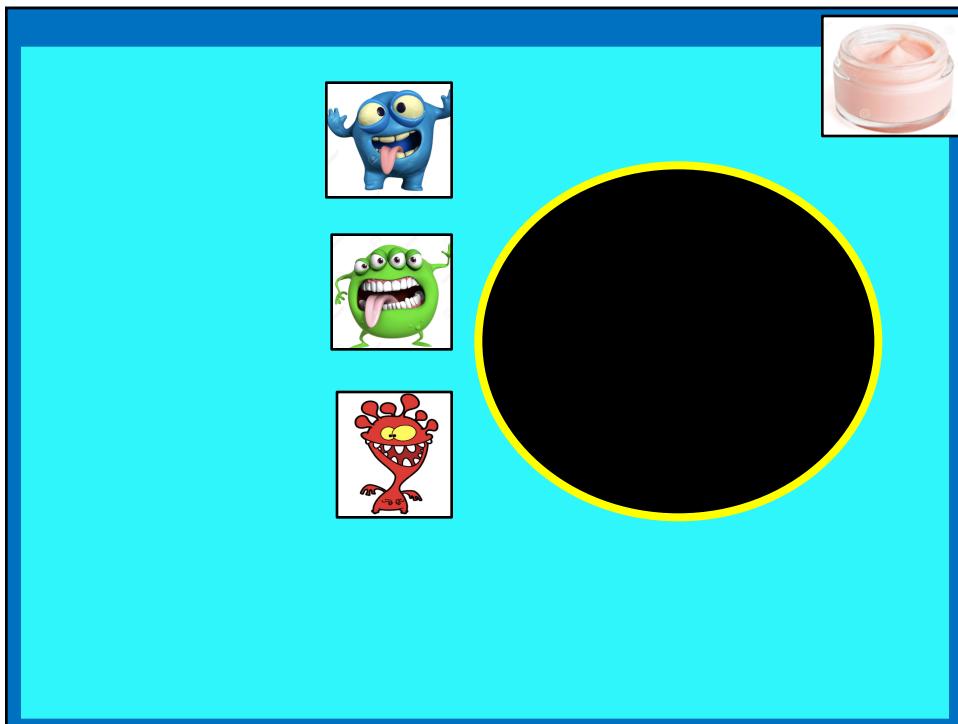
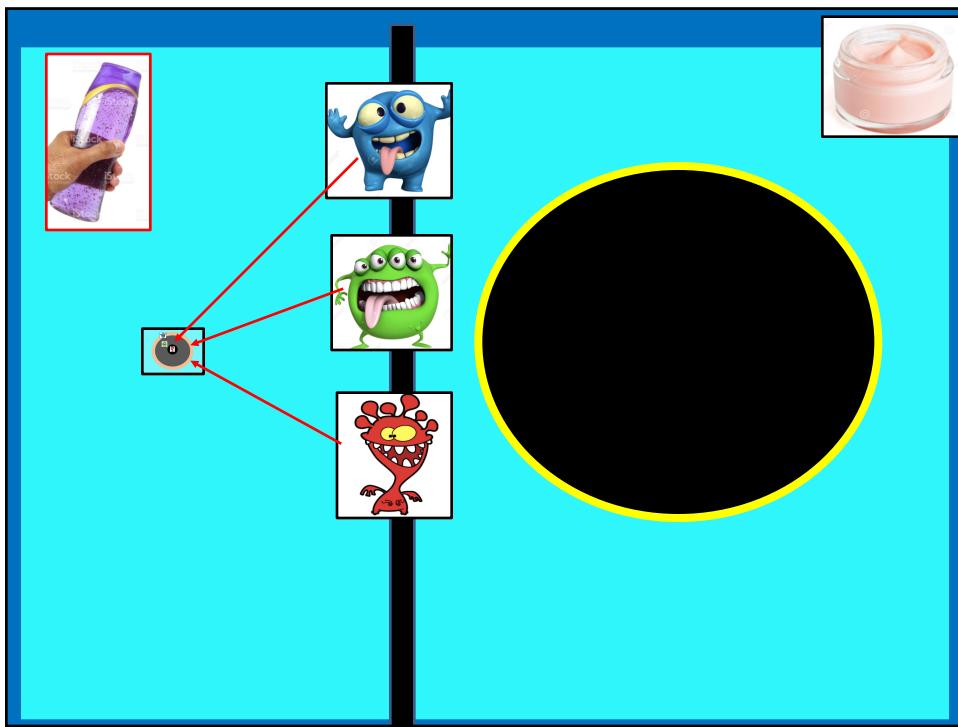
TABLE 3		
PBI Values for Various Perfumes		
Perfume Molecule	PBI	"20% Burst"?
Acetanisol	-31,000	No
p-Cresol	-27,778	No
Indole	-5,209	No
Benzyl Acetate	-819	No
2-Phenoxyethanol	-156	No
2-heptanone	-153	No
Acetaldehyde	-130	No
Cinnamyl Acetate	-122	No
Hexanal	-109	No
Methyl Benzoate	-13	No
Anisole	-5	No
Limonene	12	Yes
p-Cymene	12.2	Yes
alpha-pinene	20	Yes
Isoeugenol	58	Yes
Menthone	61	Yes
Naphthalene	107	Yes
2-Nonanone	180	Yes
Tetrahydrolinalool	202	Yes
Linalool	240	Yes
Dihydromyrcenol	307	Yes
Nonanal	502	Yes
Ethyl Undecylenate	624	Yes
Decanal	942	Yes
alpha-ionone	1,692	Yes
gamma-methyl ionone	1,677	Yes
1-nonanol	24,164	Yes
Methyl Linolenate	771,304	Yes
Methyl Linoleate	61149428	Yes

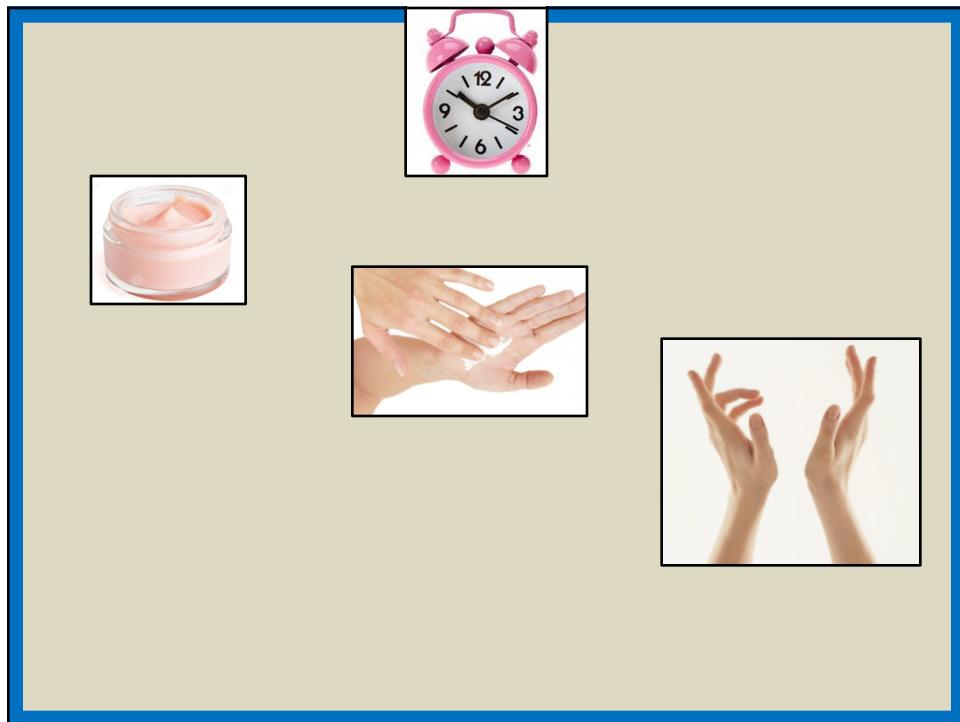
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Methyl Linolenate	771,304	Yes
Methyl Linoleate	61149428	Yes

PH Eter Sulfato – Betaina ?		
Perfume Molecule	PBI	"20% Burst"?
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p-Cresol	-27,778	No
Indole	-5,209	No
Benzyl Acetate	-819	No
2-Phenoxyethanol	-156	No
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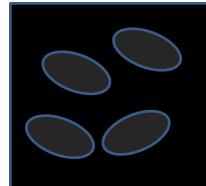




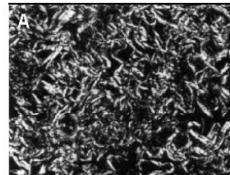
## Depositos en PIEL de distintas Cremas y Lociones



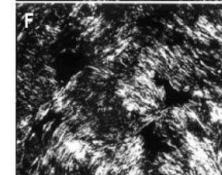
Crema 1



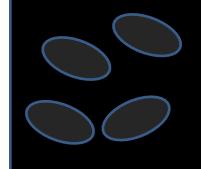
Crema 2



Crema 3

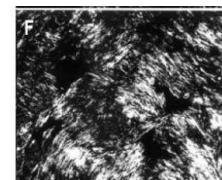
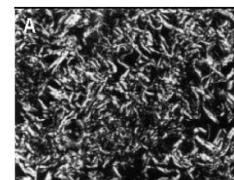


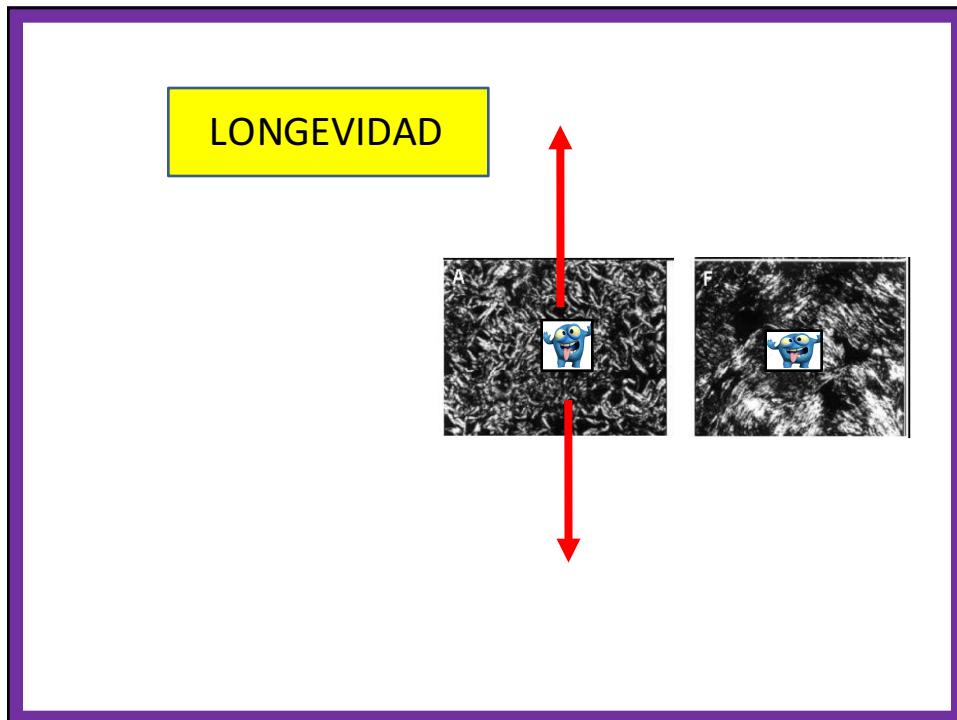
Crema 1



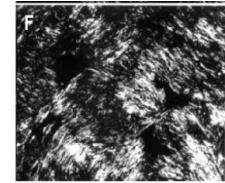
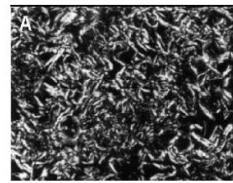
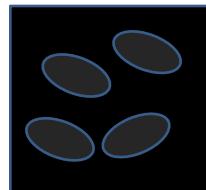
Fragancia “libre” para  
evaporarse y penetrar la piel

Fragancia  
“atrapada” ?

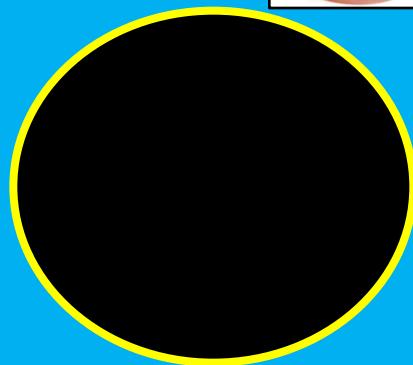
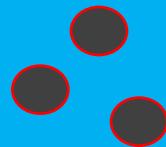


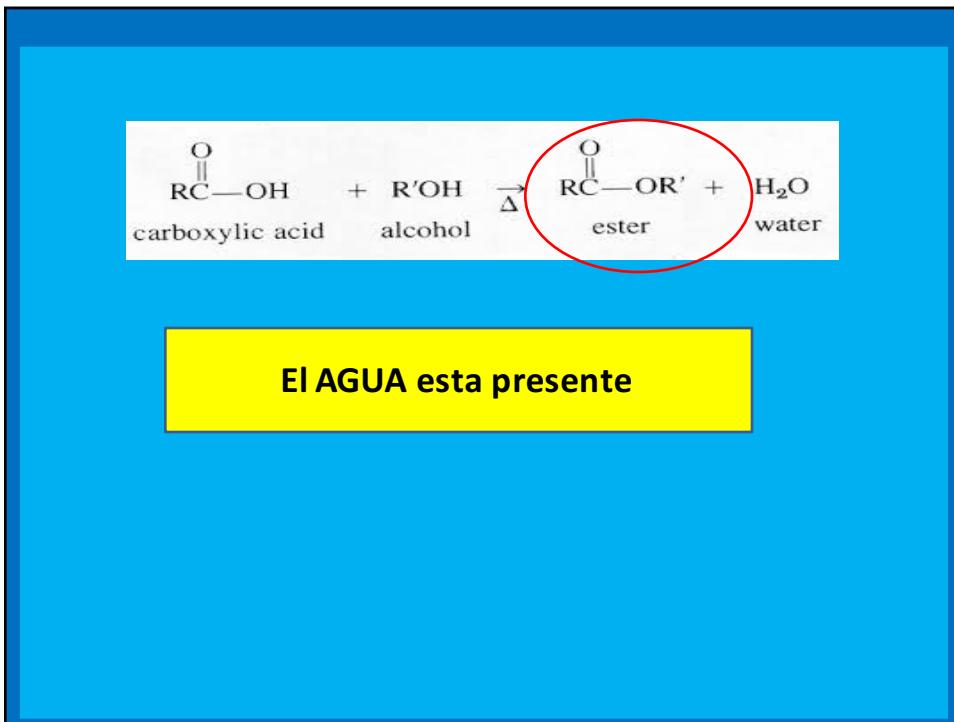


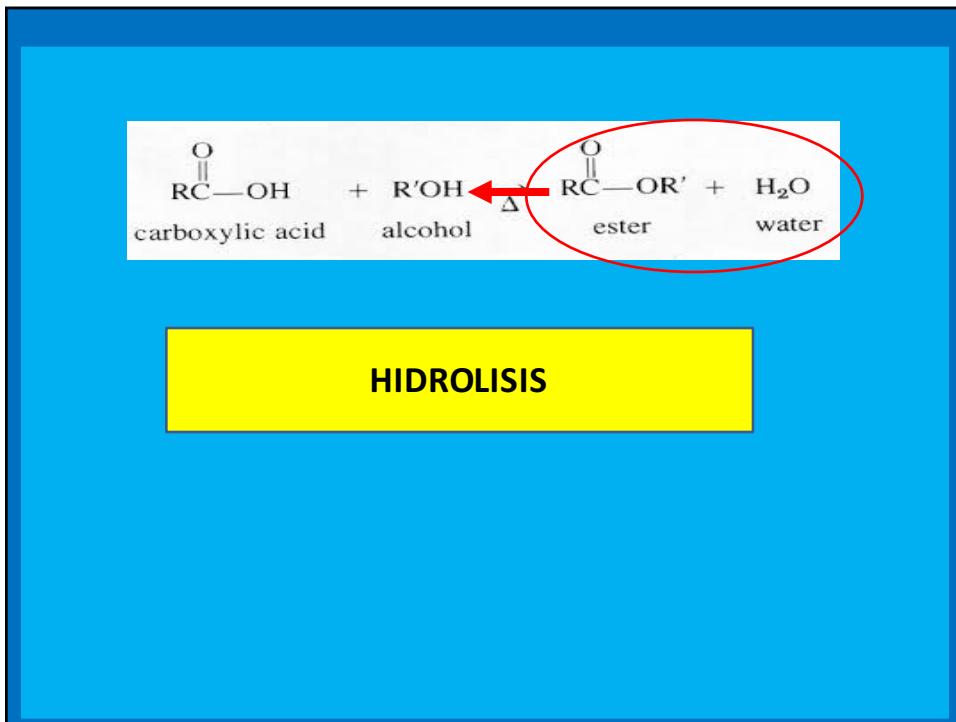
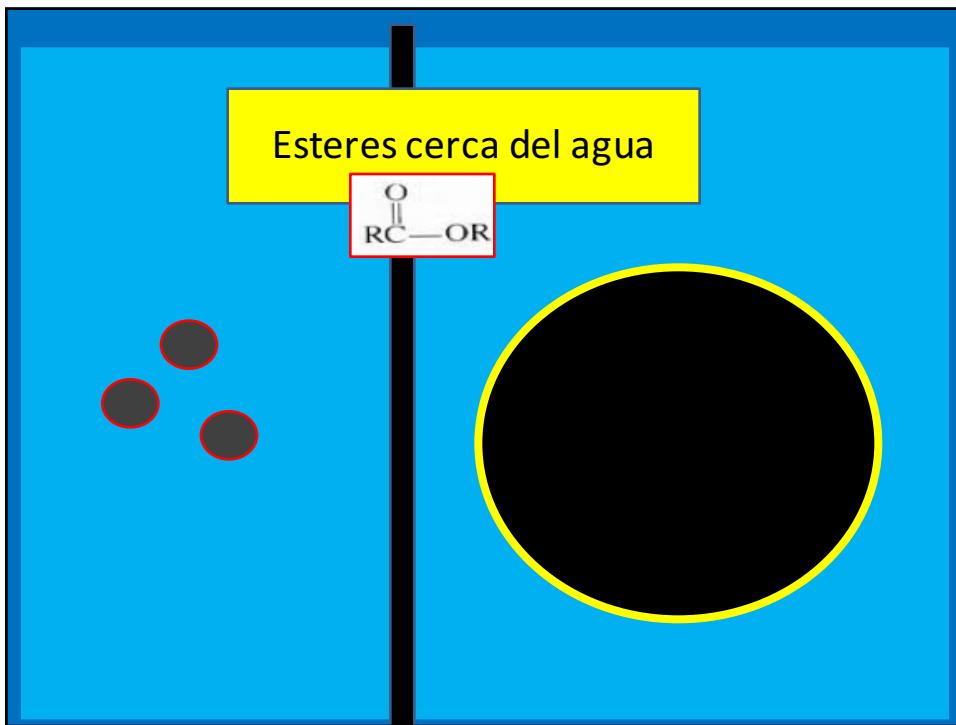
## Distintos Olores Residuales

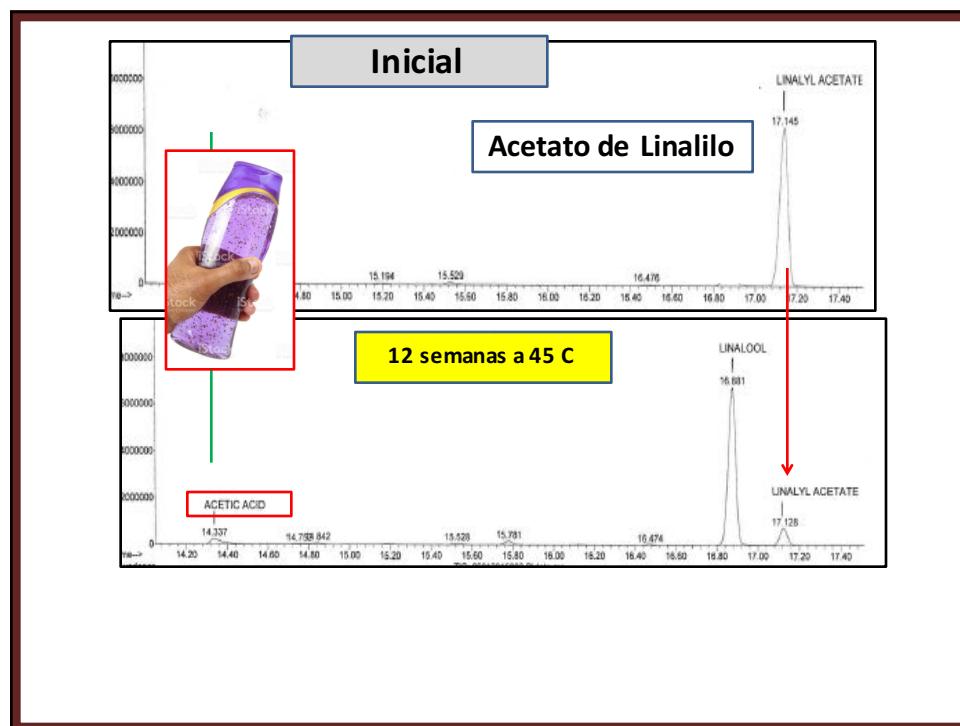
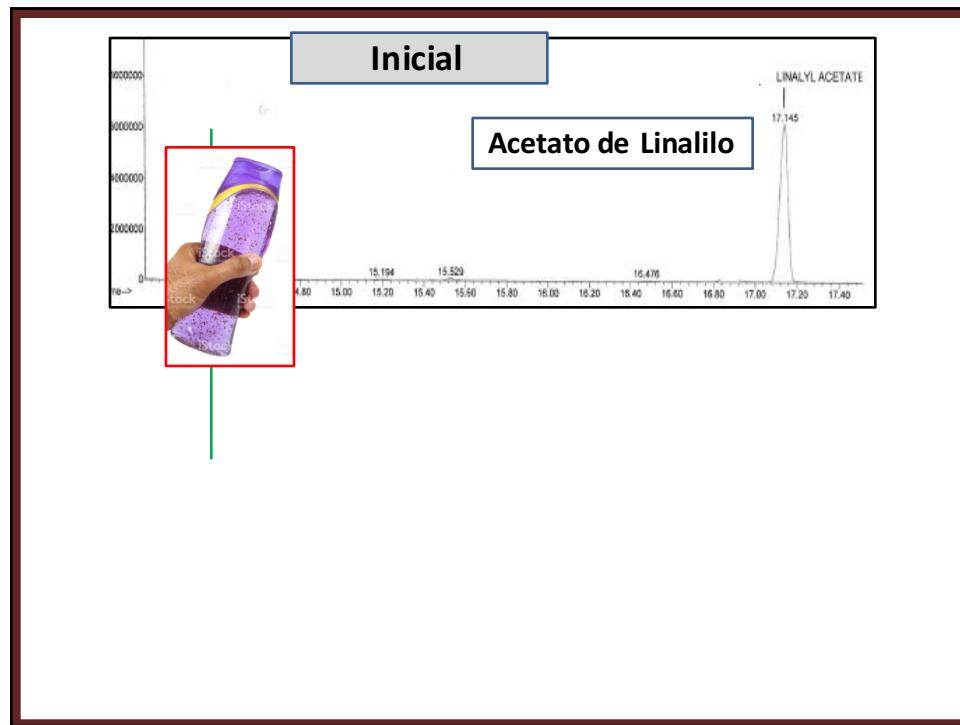


Independientemente del tipo de producto

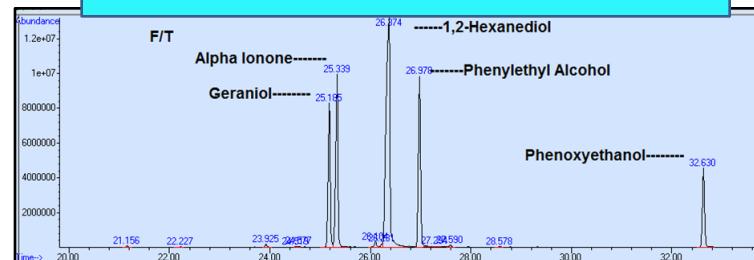




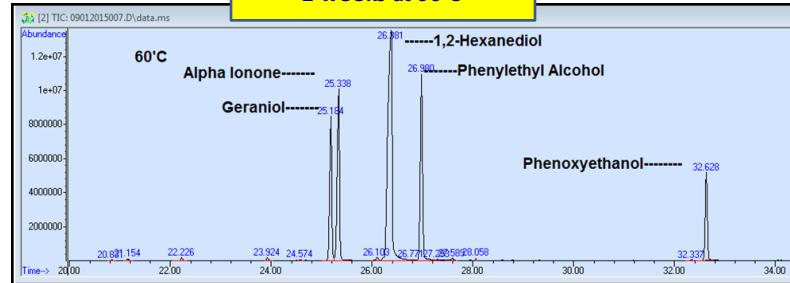




## Otras moléculas son muy estables



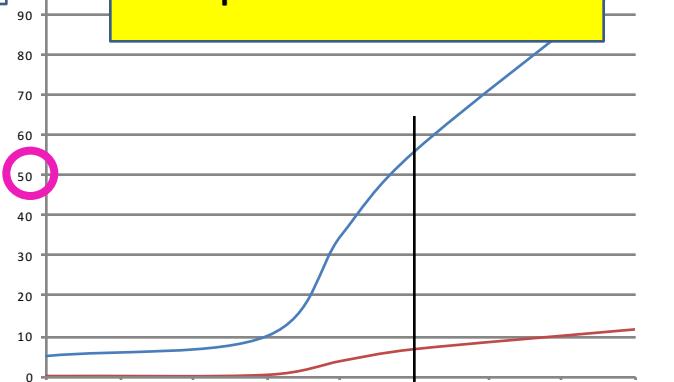
2 weeks at 60 °C



## 2 Esteres Distintos

%  
Desaparición

Desaparición en 2 semanas



Número de días para que desaparezca el 50% del ester a 45 C								
	pH 3	pH 4	pH 5	pH 6	pH 7	pH 8	pH 9	pH 10
BENZYL FORMATE	1	3	7	4	1	0	0	0
BENZYL ACETATE	22	120	322	427	281	92	15	1
BENZYL PROPIONATE	30	143	391	620	569	303	93	17
BENZYL BUTYRATE	73	260	586	839	764	442	163	38
BENZYL ISOBUTYRATE	403	752	1090	1226	1071	727	383	157
BENZYL SALICYLATE	>>365	>>365	2975	630	133	28	6	1
BENZYL BENZOATE	> 365	> 365	> 365	> 365	> 365	736	288	113
BENZYL PHENYL ACETATE	83	389	916	1092	659	201	31	2
BENZYL TIGLATE	> 365	> 365	> 365	> 365	> 365	> 365	> 365	> 365
EUGENYL ACETATE	239	476	493	266	74	11	1	0
EUGENYL PHENYL ACETATE	727	774	529	232	65	12	1	0
ANISYL ACETATE	27	112	264	363	290	135	36	6
CINNAMYL ACETATE	115	354	632	659	400	141	29	3
CINNAMYL CINNAMATE	9377	7232	4482	2232	893	287	74	15
CITRONELLYL ACETATE	65	243	573	842	774	445	160	36
LINALYL ACETATE	8	13	18	23	26	27	25	21
GERANYL ACETATE	89	234	423	523	442	255	101	27

**Formulaciones SIN y CON Fragancia**




**Estabilidad a 5, 20, 30, 40, 45 y 55 C**

**Leer el pH o El Índice de Acidez**

