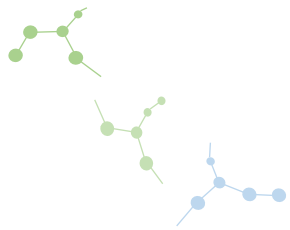
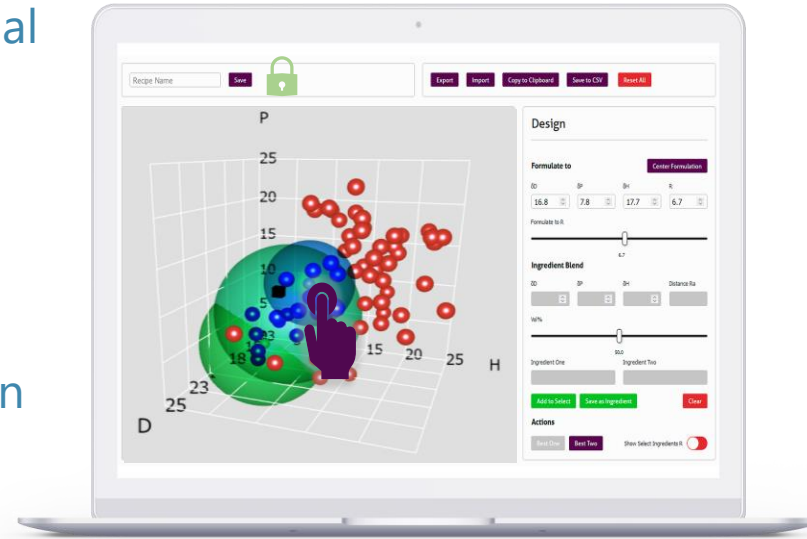
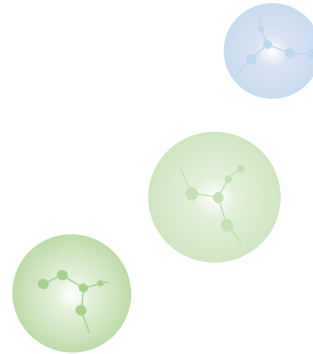


Web-apps PrediMatch and PrediMulsion: Science-based Formulation R&D

- Science-based formulation R&D of coatings, inks, personal and home care, ... = simplified via web-apps
- Sustainable use of HSP and HLD from commercial ingredients via our world's largest shared dataset PredictID
- Find 100x faster your matching, replacing and compatibilizing ingredients and narrow down formulation space a 10-fold!



The collage consists of several overlapping screenshots from different web applications. The top left screenshot shows a table with columns 'Name', 'ID', 'SP', 'SH'. The middle left screenshot shows an advertisement for 'Clean Beauty with Citropol' featuring a woman's face. The middle right screenshot shows a product page for 'Solsperse W100 Aqueous Dispersant'. The bottom left screenshot shows a section titled 'Our products' for 'elean'. The bottom right screenshot shows an advertisement for 'SIBELCO' with the text 'We are a global material solutions company'.

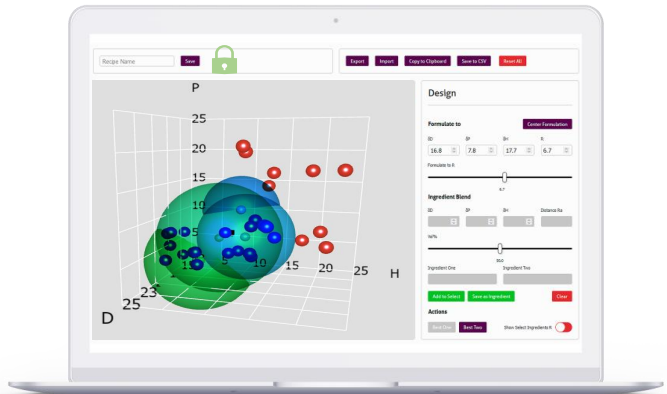


Web-apps PrediMatch and PrediMulsion: Sustainable & Collaborative Formulation R&D

- **Collaborative** upgrade; free HSP and HLD of selected ingredients by users, while suppliers adding any ingredient for free (and receive HSP/HLD). Already >16k ingredients, >100 types and >90 suppliers

PrediMatch (Predictive Ingredient Dataset)

Name	Type	Industry	Application	Sup
Aerosol AT100	solvent	Paints & coatings	Solv	1
Aerosol B45	solvent	Paints & coatings	Solv	1
Cetiol HE	emulsifier	Cleaners, Cosmetics, Personal care	BAS	1



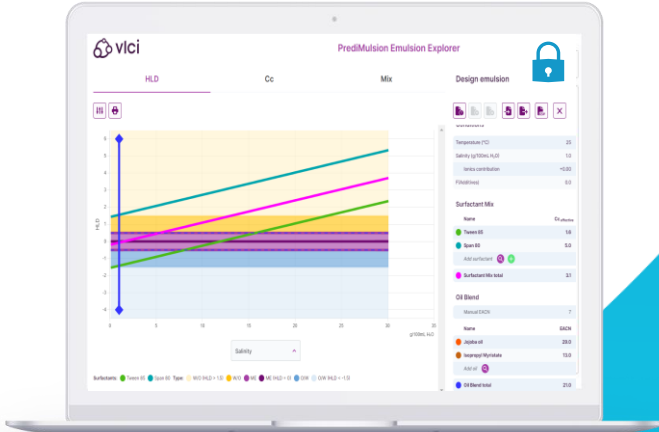
- **Privately** upload your own HSP/HLD datasets

vici My Pre

Upload CSV

Choose File | No file chosen

Name	Surfactant type	Cc	C%	b	k	a	Mw	Density	Source	Industry
Tes surfactant	Non-ionic	0.00	1.50	0.10	0.07	0.01	400	1		



Web-app PrediMatch: Sustainable & Collaborative Formulation R&D

- **PrediMatch** calculates **best matching ingredients to formulate** based on **HSP distances to optimize performance**



Web-app PrediMulsion: Science-based Formulation R&D

- By **matching HLD** of oils and surfactants in your emulsion, a **minimal amount and number** is needed to get the **maximum performance!**
- **PrediMulsion** calculates **best matching ingredients** based on **HLD distance**

$$\text{HLD} = F(S) - k \cdot \text{EACN} - \alpha \cdot \Delta T + C_c + f(A)$$

Surfactants

Select datasets
HLD Surfactants PredictID

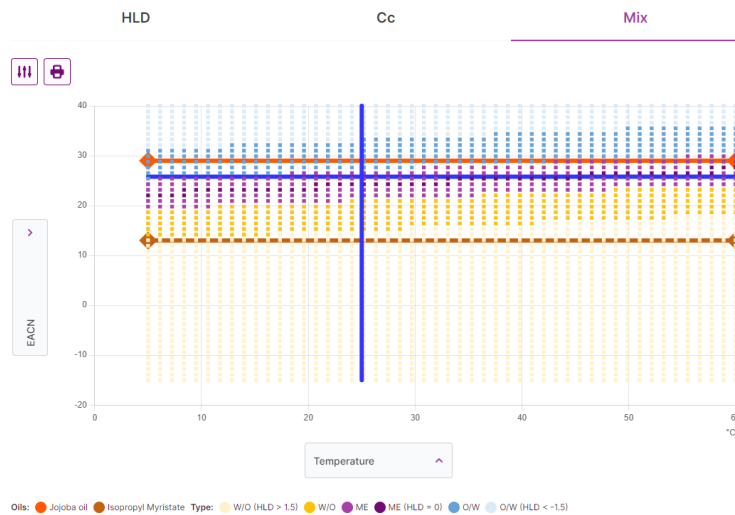
Select surfactant types
-

Name ↑↓	HLD ↕	Surfactant type ↑↓	Cc ↑↓
Tween 85	-2.1	Ethoxylate	2.50
Span 80	0.7	Other	5.00
Aerosol IB45	-6.7	Anionic	-2.30
C12-16EO14	-6.6	Ethoxylate	-2.90
C10Glucoside	-6.0	APG	-1.70
Aerosol AY100	-5.9	Anionic	-1.50
APG8-10	-5.8	APG	-1.50
APG12-14	-5.3	APG	-1.00

Oils

Search
Enter (part of) name, CAS or I

Select industries
-



Oils: Jojoba oil Isopropyl Myristate Type: W/O (HLD > 1.5) W/O ME ME (HLD = 0) O/W O/W (HLD < -1.5)

Design emulsion

✓ HLD = -0.3 ME

Parameters

Temperature (°C) 25

Salinity (g/100mL H₂O) 1.0

Ionic contribution +0.00

F(Additives) 0.0

Surfactant Mix

Name	Cc effective	Concentration (g:100mL Oil)
Tween 85	1.6	5
Span 80	5.0	11
Surfactant Mix total	3.8	16

Oil Blend

Manual EACN 7

Name	EACN	Volume ratio
Jojoba oil	29.0	4
Isopropyl Myristate	13.0	1
Oil Blend total	25.8	5

Science-based Formulation via webapps

- Using HSP and HLD maximizes overall performance of formulations
- Everyone can join with a license: privately formulate in minutes via shared and private HSP/HLD datasets, then experimentally validate
- Formulators and ingredient suppliers guiding the shared datasets; together we implement science-based formulation!
- Drastically save on:
 - ✓ Time
 - ✓ Samples
 - ✓ Costs

