



FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015

czech
AEROSOL

Information Technology in the Aerosol RDI Laboratory Management

Martin Surýnek Ph.D., Czech Aerosol a.s.

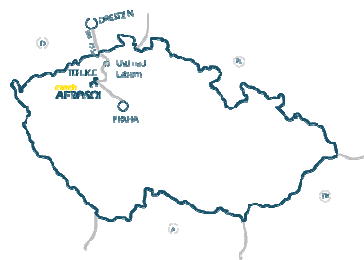


FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015

czech
AEROSOL


Czech Aerosol a.s. (CA)

- more than 50 Years of aerosol manufacturing and experience in industry
- is **the oldest** and **the biggest** Aerosol manufacturer in the Czech Republic
- three Pamasol aerosol production lines




Martin Surýnek, Ph.D. and R&D by CA

- by Czech Aerosol a.s. since 2010
- 2010-2012 as R&D researcher
- 2012-now as Head of R&D
- R&D in CA consist of 5 researchers, 2 legislation specialists and 2 technicians



FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015



Starting point

- growing number of projects ...
- customer requests to have faster feedback to their demands ...
- = pressure to increase effectiveness with same personal capacity


Situation and weak points ...

- data in paper orders and data files ...
- problems with data searching, sharing, identification ...
- information system not customized for effective R&D work ...
- source of errors ...
- not uniform outputs ...


all above mentioned points have common thing = time lost

=> Dream to have a customized “one click” system with all data on one place and accessible from anywhere.

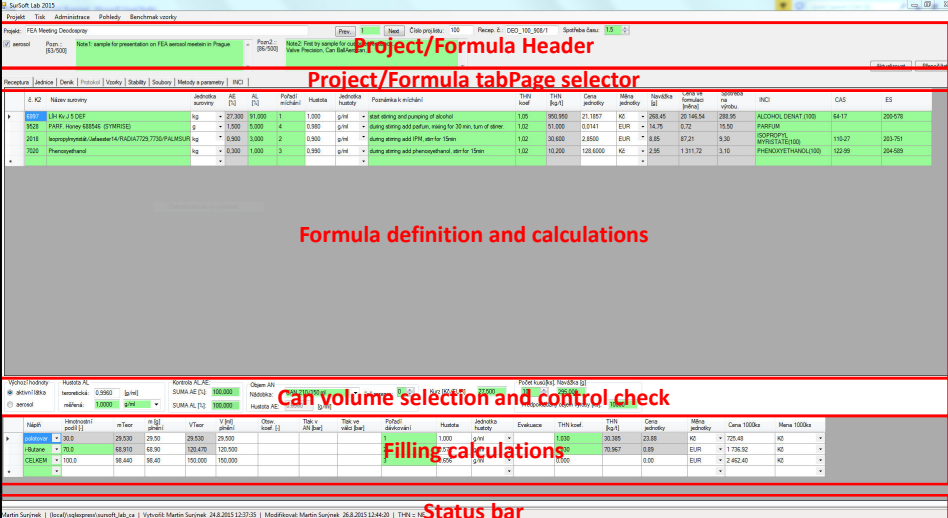
And now I present you how we solved it and how it works.



FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015



R&D laboratory management system called “Sursoft” – Global overview



Project/Formulas Header


Project/Formulas Page selector

Formula definition and calculations


Can volume selection and control check

Filling calculations

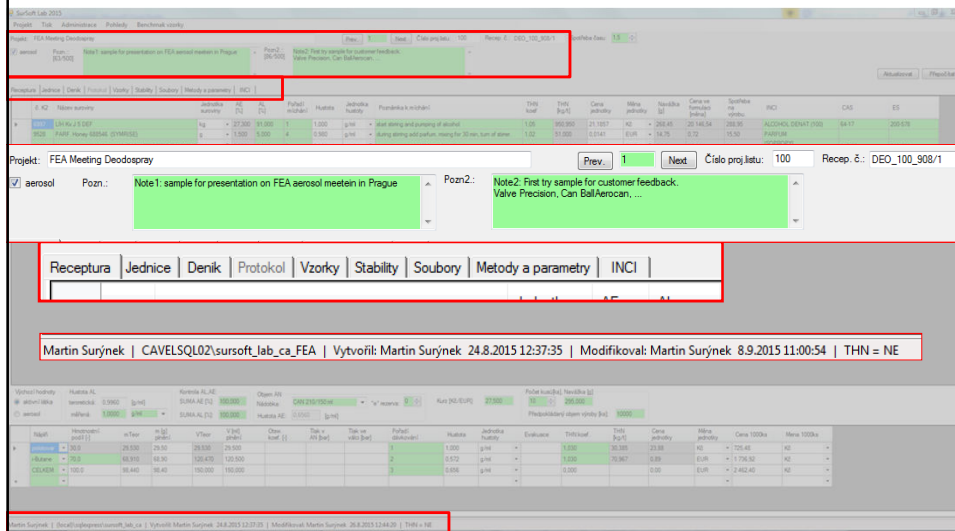
Status bar




FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015




R&D laboratory management system called "Sursoft" – Project / Formula header, tabPage selector

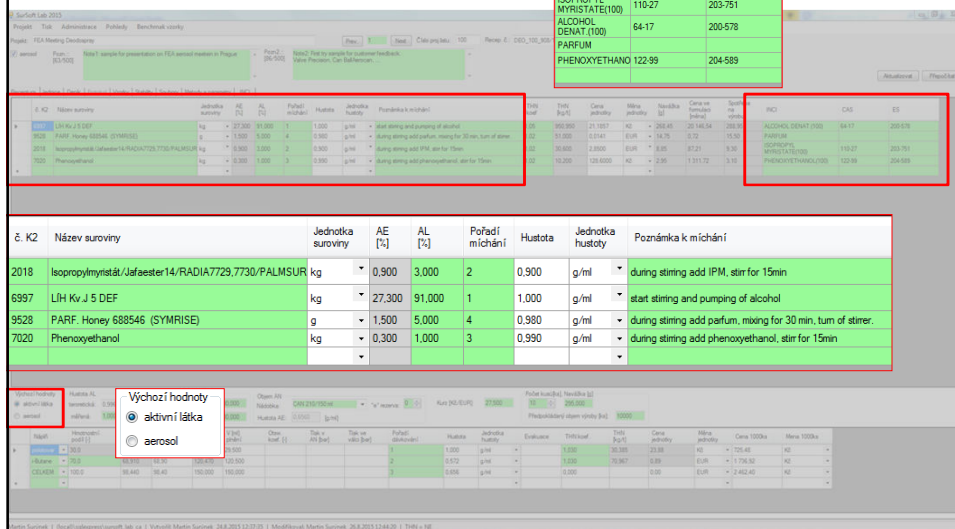




FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015



R&D laboratory management system called "Sursoft" – Formula definition



INCI	CAS	ES
ISOPROPYL MYRISTATE(100)	110-27	203-751
ALCOHOL DENAT.(100)	64-17	200-578
PARFUM		
PHENOXYETHANOL	122-99	204-589

č. KZ	Název suroviny	Jednotka suroviny	AE [%]	AL [%]	Pořadí míchání	Hustota	Jednotka hustoty	Poznámka k míchání
2018	Isopropylmýstát./Jafaester14/RADIA7729.7730/PALMSUR	kg	0,900	3,000	2	0,900	g/ml	during stimg add IPM, stir for 15min
6997	LÍH Kv.J 5 DEF	kg	27,300	91,000	1	1,000	g/ml	start stimg and pumping of alcohol
9528	PARF. Honey 688546 (SYMRISE)	g	1,500	5,000	4	0,980	g/ml	during stimg add parfum. mixing for 30 min, turn of stimer.
7020	Phenoxyethanol	kg	0,300	1,000	3	0,990	g/ml	during stimg add phenoxyethanol, stir for 15min

FEA General Assembly & Forum 2015 in Prague on the 22nd and 23rd of September 2015

R&D laboratory management system called "Sursoft" – Can Volume, Control check, calculations

THN koef	THN [kg·t]	Cena jednotky	Měna jednotky	Navážka [g]	Cena ve formulaci [měna]	Spotřeba na výrobu.
1.02	30,600	2,8500	EUR	8,85	87,21	9,30
1.05	950,950	21,1857	Kč	268,45	20 146,54	288,95
1.02	51,000	0,0141	EUR	14,75	0,72	15,50
1.02	10,200	128,6000	Kč	2,95	1 311,72	3,10

Kontrola ALAE:
 SUMA AE [%]: 100,000
 SUMA AL [%]: 100,000

Objem AN
 Nádobka: CAN 210/150 ml
 Hustota AE: 0,656 [g/ml]

Počet kusů[ks], Navážka [g]
 10 295,000
 Předpokládaný objem výroby [ks]: 10000

THN koef	THN [kg·t]	Cena jednotky	Měna jednotky	Navážka [g]	Cena ve formulaci [měna]	Spotřeba na výrobu.
1.02	30,600	2,8500	EUR	8,85	87,21	9,30
1.05	950,950	21,1857	Kč	268,45	20 146,54	288,95
1.02	51,000	0,0141	EUR	14,75	0,72	15,50
1.02	10,200	128,6000	Kč	2,95	1 311,72	3,10


FEA General Assembly & Forum 2015 in Prague on the 22nd and 23rd of September 2015

R&D laboratory management system called "Sursoft" – Propellant and Filling definition


Náplň	Hmotnostní podíl [%]	m Teor	m [g] plnění	V Teor	V [ml] plnění
polotovary	30,0	29,530	29,50	29,530	29,500
i-Butane	70,0	68,910	68,90	120,470	120,500
CELKEM	100,0	98,440	98,40	150,000	150,000

Pořadí dávkování	Hustota	Jednotka hustoty
1	1,000	g/ml
2	0,572	g/ml
3	0,656	g/ml

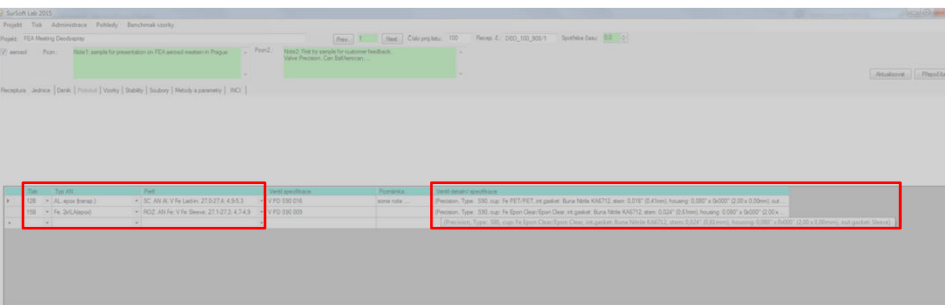
THN koef.	THN [kg·t]	Cena jednotky	Měna jednotky	Cena 1000ks	Měna 1000ks
1,030	30,3850	23,88	Kč	725,48	Kč
1,030	70,9670	0,89	EUR	1 736,92	Kč
0,000		0,00	EUR	2 462,40	Kč



FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015



R&D laboratory management system called "Sursoft" – Page „Jednice“ = unit assembly definition




Titak	Typ AN	Pertl
12B	AL, epox (transp.)	SC, AN Al; V Fe Laid-in; 27.0-27.4; 4.9-5.3
15B	Fe, 2x1LA(epox)	ROZ, AN Fe; V Fe Sleeve; 27.1-27.3; 4.7-4.9

Ventil detailní specifikace


(Precision, Type: S90, cup: Fe PET/PET, int.gasket: Buna Nitrile KA6712, stem: 0.016" (0,41mm), housing: 0.080" x 0x000" (2,00 x 0,00mm), out....

(Precision, Type: S90, cup: Fe Epon Clear/Epon Clear, int.gasket: Buna Nitrile KA6712, stem: 0.024" (0,61mm), housing: 0.080" x 0x000" (2,00 x ...

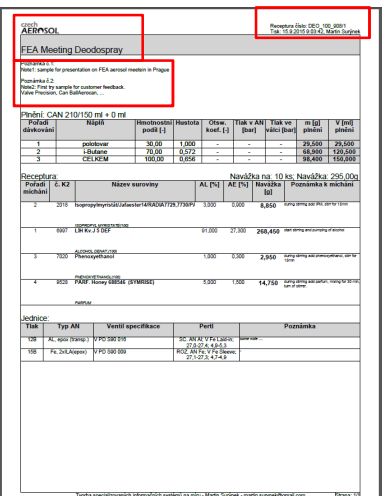
(Precision, Type: S90, cup: Fe Epon Clear/Epon Clear, int.gasket: Buna Nitrile KA6712, stem: 0.024" (0,61mm), housing: 0.080" x 0x000" (2,00 x 0,00mm), out.gasket: Sleeve)



FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015



R&D laboratory management system called "Sursoft" – Formula and Filling definition - printout




Receptura číslo: DEO_100_908/1
Tisk: 15.9.2015 9:03:42, Martin Surýnek

czech AEROSOL


FEA Meeting Deodospray

Poznámka č.1:
Note1: sample for presentation on FEA aerosol meetin in Prague

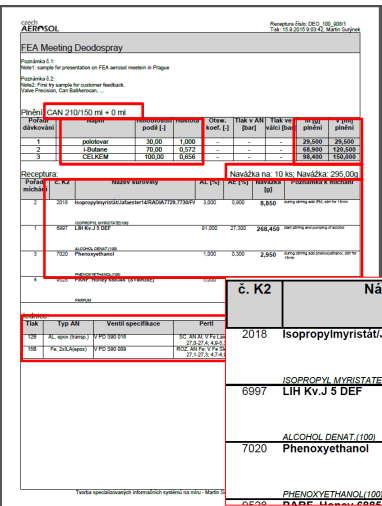
Poznámka č.2:
Note2: First try sample for customer feedback.
Valve Precision, Can BallAeroacan, ...



FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015




R&D laboratory management system called "Sursoft" – Formula and Filling definition - printout




Náplň	Hmotnostní podíl [-]	Hustota	m [g] plnění	V [ml] plnění
polotovár	30,00	1,000	29,500	29,500
i-Butane	70,00	0,572	68,900	120,500
CELKEM	100,00	0,656	98,400	150,000

Navážka na: 10 ks; Navážka: 295,00g

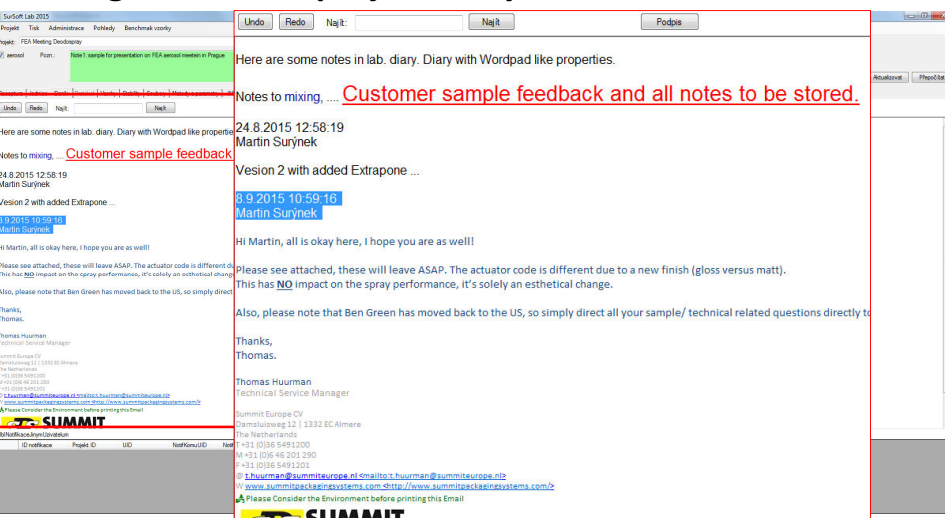
č. K2	Název suroviny	AL [%]	AE [%]	Navážka [g]	Poznámka k míchání
2018	Isopropylmristát/Jafaester14/RADIA7729,7730/PA	3,000	0,900	8,850	during stirring add IPM, stir for 15min
6997	LIH KV.J 5 DEF	91,000	27,300	268,450	start stirring and pumping of alcohol
7020	Phenoxyethanol	1,000	0,300	2,950	during stirring add phenoxyethanol, stir for 15min





FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015

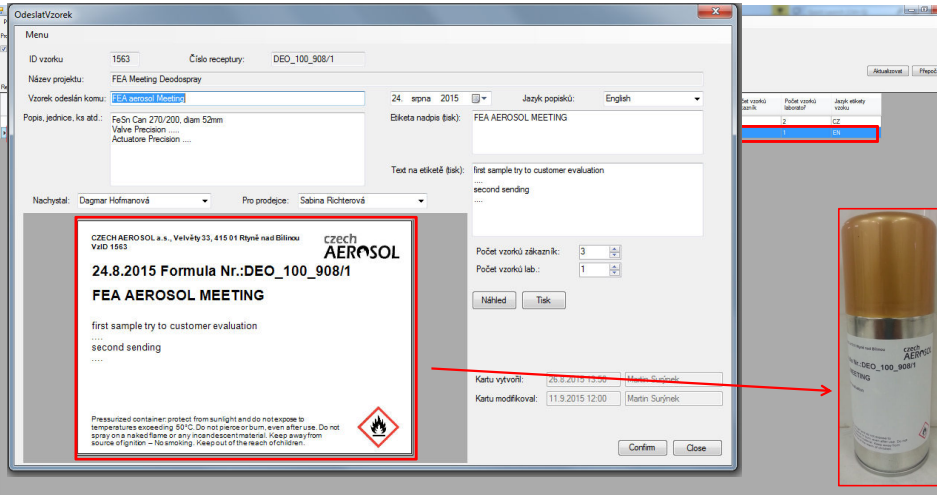


R&D laboratory management system called "Sursoft" – Page „Deník“ = project diary




 FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015




R&D laboratory management system called "Sursoft" – Page „Vzorky“ = customer sent samples information



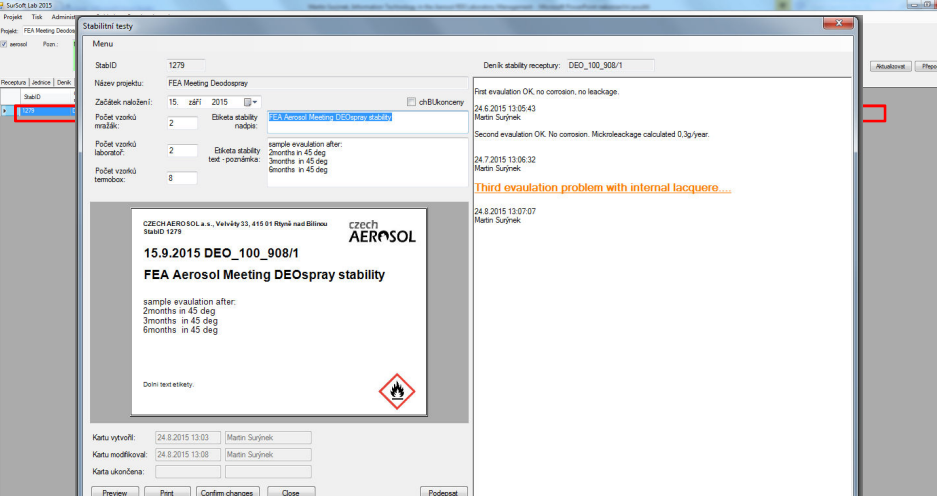
24.8.2015 Formula Nr.: DEO_100_908/1
FEA AEROSOL MEETING

first sample try to customer evaluation
 ...
 second sending
 ...

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any naked experimental flame. Keep away from source of ignition – No smoking. Keep out of the reach of children.


 FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015


R&D laboratory management system called "Sursoft" – Page „Stability“ = formulation stability information



15.9.2015 DEO_100_908/1
FEA Aerosol Meeting DEOSpray stability


sample evaluation after:
 2months in 45 deg
 3months in 45 deg
 6months in 45 deg

Denik stability receipt: DEO_100_908/1


First evaluation OK, no corrosion, no leakage.
 24.6.2015 13:05:43
 Martin Surjnek

Second evaluation OK, No corrosion. Microleakage calculated 0,3p/year.
 24.7.2015 13:06:32
 Martin Surjnek

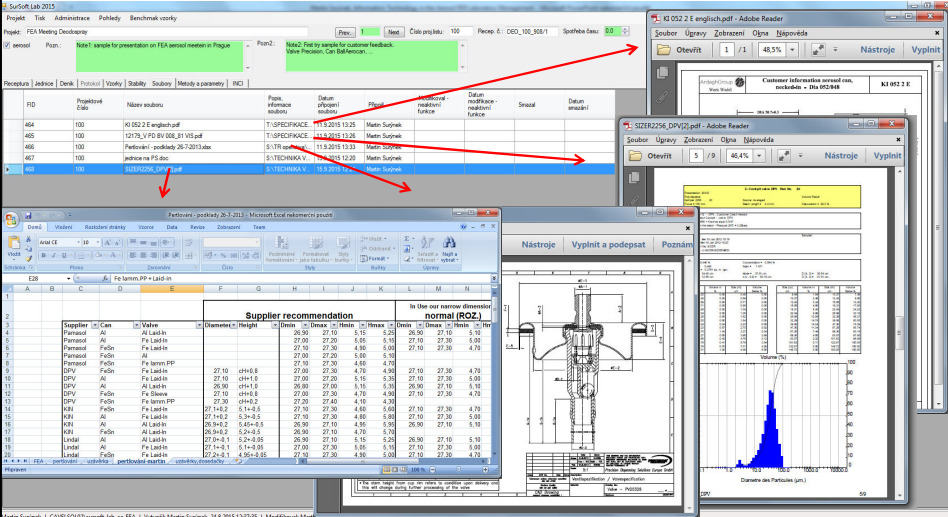
Third evaluation problem with internal lacquer...
 24.8.2015 13:07:07
 Martin Surjnek




FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015




R&D laboratory management system called "Sursoft" – Page „Souborny“ = related files to form. project



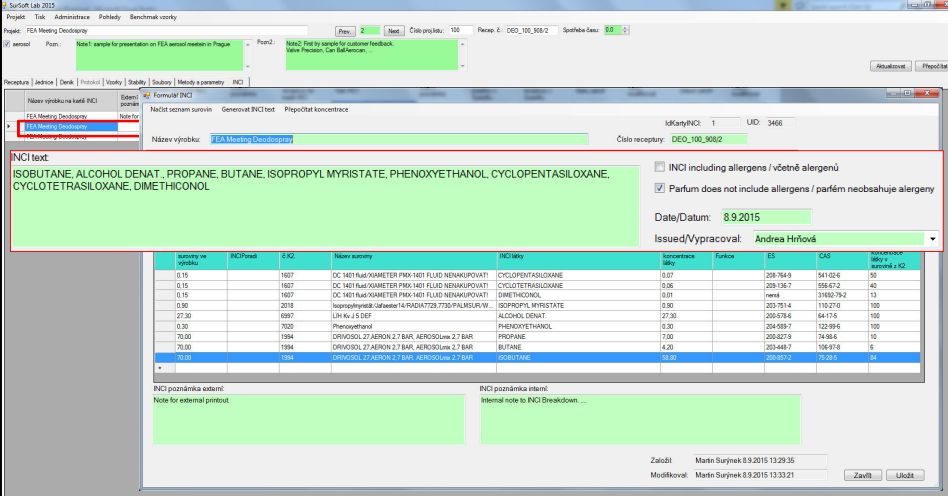
The screenshot displays the 'Souborny' (Attachments) page in the Sursoft system. At the top, a table lists project files with columns for ID, Page, Name, Paper, Date, and Status. Below this, a detailed 'Supplier recommendation' table is visible, listing various suppliers and their product specifications. To the right, a PDF viewer shows a technical drawing of a component. The interface includes standard software navigation elements like menus, toolbars, and a status bar at the bottom.



FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015



R&D laboratory management system called "Sursoft" – Page „INCI“ = INCI breakdown and PIF tool



The screenshot displays the 'INCI' (International Nomenclature of Cosmetic Ingredients) breakdown tool. It shows a list of ingredients with columns for Name, INCI Name, CAS, and other properties. The interface includes a search bar, a list of ingredients, and a table of results. The status bar at the bottom shows the user's name and the date of the last modification.



FEA General Assembly & Forum 2015 in Prague on the
22nd and 23rd of September 2015



R&D laboratory management system called “Sursoft” – Effectivity evaluation

- all data on one place and online accessible
- system connected (binded) to company information system
- one click switch between information groups (tabPages)
- online calculations
- automatic filling calculation for selected AE can volume with check of propellant compatibility
- integrated laboratory diary
- stability test results binded to formulation, overview of all running tests
- automatic samples labeling
- uniform output to lab. technicians, brand managers, purchasing dept.
- **we are able to have fast feedback with same personal capacity to growing customer demands**

Thank you for your attention.