EUREKA PROJECT E!1937- MICROCAP

1. General description

Project	E! 1937- MICROCAP	**Status**	Finished- 27-MAR-2001
Title	**Microencapsulated Products Applied To Textiles, Automotive Linings And Leather.**		
Class	Project	**Technological area**	New Materials
Start date	01-JAN-1999	**End date**	01-JAN-2001
Duration	24months	**Total cost**	0.7Meuro
Partner sought	No		
Summary	Exploration Of The Possibilities That Successful Laboratory- Scale Microencapsulation Of Some Products Can Provide To Industries (I.E. Sensitive Dye Protection Product And Microencapsulation Of Dyes For Polyamide Fibres).		

Budget and duration

Phase	Budget(Meuro)	Duration (Months)
Definition phase	0.1	6
Implementation phase	0.6	18
Total	**0.7**	**24**

Member contribution

Member	Contribution	Position	Since
Portugal	**50.00%**	**Notified Finished**	**27-MAR-2001**
Czech Republic	20.00%	Notified Finished	27-MAR-2001
United Kingdom	30.00%	Notified Finished	27-MAR-2001

Participants

Company	Country	Type	Role
Indinor-Industrias Quimicas S.A.	**Portugal**	**SME**	**Main**
Universidade Do Minho/Departamento De Engenharia Textil	Portugal	University	Partner
University Of Pardubice/Organic Technology Department	Czech Republic	University	Partner
Avocet Dye & Chemical Co. Ltd.	United Kingdom	SME	Partner
Lonka Pribor A.S.	Czech Republic	SME	Partner

2. Project outline

Project description

The products produced to date have been developed for applications to textiles are colour protection products and hydrogen peroxide, both released during domestic washing and microencapsulated dyes that will dye polyamide fibres without staining.
The project consists of exploring the possibilities that microencapsulation of some products obtained successfully in the laboratory, can bring to some industries that are willing to introduce them on an industrial scale.
The end use of two of the three products already microencapsulated have been proven, albeit in the laboratory. These products are respectively:
* the colour protection product, which protects sensitive dyes, such as reactive dyes for cellulosic fabrics, against the bleaching action of perborates, and other peroxides in detergents that occur during repeated domestic washing, and
* the microencapsulation of dyes for polyamide fibres.
Hydrogen peroxide has also be microencapsulated with success in the laboratory, and partners are sought to bring ideas for its application in this form.
Other products are still be developed such as microencapsulated PCM, phase change materials, for isolation of car plastic linings and textiles.
Keywords: microcapsules, colour fastness, textile dyeing.

Technological development envisaged

Industrial techniques of microencapsulation for the products already tested and microencapsulation and application of PCM to car linings and protective clothing.

Markets application and exploitation

Europe.

Project codes

BSI

WN	textile testing
DY	polymers
DO/DY	organic chemistry
DRR	heterocyclic compounds
DT	heterocyclic aromatic compounds
DV	natural product chemistry
DHH	surface chemistry
DKC.C	oxides
CYP.P	colour
D	chemistry

NACE

24511	Manufacture of soap and detergents

NACE

24	Manufacture of chemicals and chemical products
1730	Finishing of textiles
17	Manufacture of textiles

3. Main participant

Company	**Indinor-Industrias Quimicas S.A.** Travessa Da Prelada, 613 4251-901 Porto Portugal Tel +351 22 834 1020 Fax +351 22 832 75587 www.indinor.pt
Contact	**Dr. Silvio Azevedo** Financial Director Tel Fax geral@indinor.pt
Organisation type	SME
Participant role	Main

Contribution to project

Will provide production capacity and capability. It has a very modern production plant and well equipped laboratories. It will also provide logistic support to the project.

Expertise

With its experience in the production of products for the leather industry, such as emulsions and polymer-based products, INDINOR will guarantee the industrial capability of the project.

4. Partner

Company	**Universidade Do Minho/Departamento De Engenharia Textil** Campus De Azurem, 4800 Guimaraes Portugal Tel +351 253 510 280 Fax +351 253 510 280 www.uminho.pt
Contact	**Dr. Jaime Rocha-Gomes** Tel +351 253 510 282/7 Fax +351 253 510 293 rgomes@det.uminho.pt

Organisation type University
Participant role Partner

Contribution to project

R & D facilities, logistics support.

Expertise

Expertise: dyes, dyeing, microcapsules, liposomes and colour fastness.

4. Partner

Company **University Of Pardubice/Organic Technology Department**
Tp Doubravice, 41
543 54 Pardubice
Czech Republic

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Head Of Department

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Organisation type University
Participant role Partner

Contribution to project

R & D facilities.

Expertise

Expertise: organic synthesis, dyes and evaporation techniques such as spray drying.

4. Partner

Company **Avocet Dye & Chemical Co. Ltd.**
Birds Rod Lane,
Hd6 1lk Brighouse
United Kingdom

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Contact **Mr. Trevor Lever**
Managing Director

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Fax

Organisation type SME
Participant role Partner

Contribution to project

Granular dyes to full scale production. Already supplies acid dyes to the textile industry but in powder form, so it can market these new products.

Expertise

Expertise: makes auxiliary products for the Textile industry, mainly to the wool and polyamide sector. AVOCET therefore has the technical capability to produce, microencapsulated, liquid or granular dyes. Because of the constant contact with their customers in the textile industry, they also have expertise in the wool and polyamide dyeing processes.

4. Partner

Company **Lonka Pribor A.S.**
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Contact

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Organisation type SME
Participant role Partner

Contribution to project

Dyeing at industrial scale.

Expertise

Dyeing and finishing of stockings.