

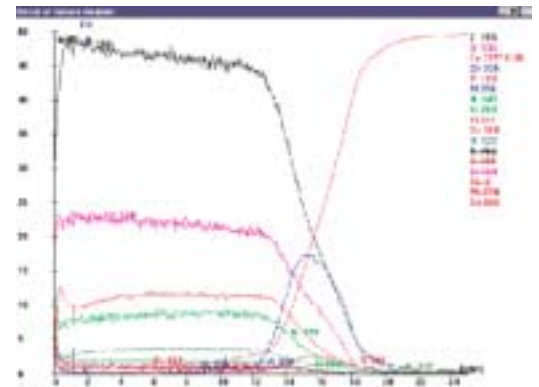
Analysis of cataphoresis

Cataphoretic coatings are an important part of automotive production. They improve adhesion and corrosion resistance beneath the outer paint layers on car bodies. Being non-conductive coatings, they pose interesting challenges for quantitative depth profiling, especially the lack of certified samples for calibration.

In the JY method the calibration curves for depth profile mix traditional bulk metal samples together with some ceramics and in house cataphoresis layers well characterized.



A typical quantified result is given below on a test sample prepared by Renault. Repeatability data on key elements are also provided.



Reference	C%	O%	H%	Tl%	Si%	Al%	Pb%	Sn%	e(µm)
D	48.3	29.2	3.9	13.5	2.3	1.46	0.71	0.45	15.2
D1	46.8	31.5	3.7	13.2	2.2	1.41	0.76	0.49	16.7
D2	48.4	28.4	3.5	15.5	2.4	1.59	0.80	0.0	15.2
D3	47.2	29.2	3.8	15.2	2.5	1.57	0.79	0.24	15.2
D4	49.3	27.3	3.3	15.1	2.6	1.63	0.75	0.23	14.7
D5	47.0	29.0	4.0	14.7	2.5	1.57	0.76	0.18	13.8
Average	47.8	29.1	3.7	14.5	2.4	1.54	0.76	0.31	15.4
Absolute sigma	1.0	1.4	0.3	1.0	0.15	0.08	0.03	0.13	0.8
Relative sigma	2.0	4.8	8.0	6.6	6.2	5.20	3.90	41.0	4.9

Key points: Non conductive cataphoresis coatings can be controlled by GDS.

In the USA:
 John Yvon Inc.
 3880 Park Avenue
 Edison, NJ 08820-3012
 Toll-Free: +1-732-494-8660
 Fax: +1-732-549-5125
 E-mail: info@johnyvon.com
 www.johnyvon.com

In France:
 John Yvon S.A.S.
 16-18 rue du Canal
 91165 Longjumeau cedex
 Tel: +33 (0) 1 64 54 13 00
 Fax: +33 (0) 1 69 09 07 21
 E-mail: info@johnyvon.fr
 www.johnyvon.fr

In Japan:
 Horiba John Yvon CO., LTD.
 Higashi-Kanda Daiji Building
 6th Floor Higashi-Kanda, Chiyoda-ku, Tokyo
 Tel: +81 (0) 3-3861-8231
 Fax: +81 (0) 3-3861-8253
Germany: +49 (0) 89 4623 17-0
Italy: +39 0 2 57603050
UK: +44 (0) 20 8204 8142

