

Sources of Failure



Phil Patterson

Marks and Spencer

**Dyeing, Printing, Finishing and Colour
Manager**

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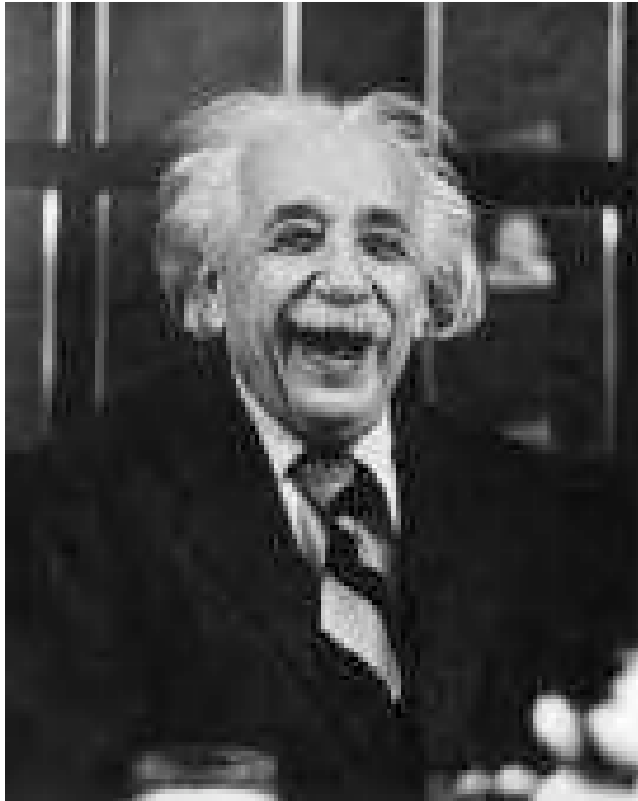
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Recap.....



By now you have.....

**Gained an understanding of
common principles**

Seen why we have RSL's

Seen some chemicals we control

Seen the consequences of failure

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Sources of Restricted Chemicals



Raw Fibre, Ecrú Yarns, Greige Fabric, Undyed Hides

Dyes and Chemicals

Ancillary Chemicals

Poor Process control



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1 Fibre, Yarn, Fabric and Hides

Never Assume it's clean....e.g.

Most silk contains APEO

Cotton and wool may contain pesticides

Some process oils are carcinogenic



Always verify your raw materials

Know what you bring in

Know what you put on

Know what you send out

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2 Dyes and Chemicals



Most failures are due to dyes and chemicals that are.....

- **Harmful themselves**
- **Contain significant concentrations of harmful chemicals**

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Someone Knows What's in the Drum !



Good suppliers know what's there (and should tell you)

MSDS essential....

But many have incomplete information

Many RSL failures due to non-deliberate application

Some companies don't provide MSDS!

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Chemical Management Risks

Unspecified chemicals in a formulation

Unlabelled drums in the store

Unlabelled buckets by the machine

..All a risk to our customers and your workers



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3 Ancillary Chemicals



What are you using to....

Clean the machines?

Clean the floors?

Lubricate the machines?

Polish the tables?

Wrap the finished product?

Remove stains?

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Ancillary Chemicals



Have you assessed your non-textile/ non-product chemical inventory?

Many common household products are not permitted on our merchandise

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4 Inadequate Process Control

Dyeing and Finishing processes are chemical reactions

Poorly controlled reactions = Risk

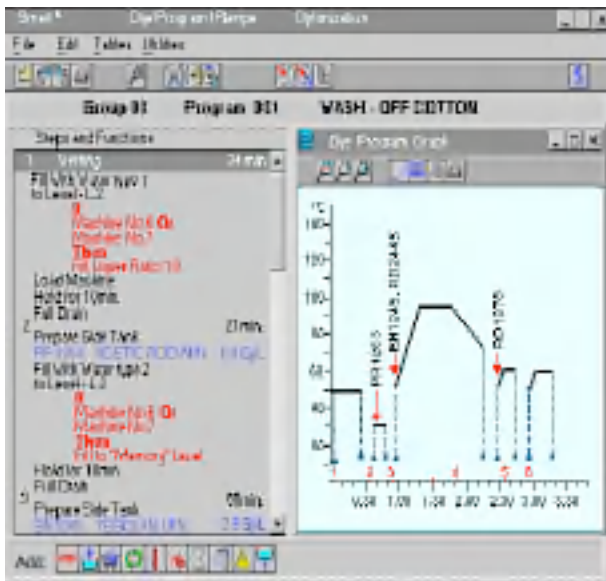
Reactions are controlled by...

Ratio of reagents

Temperature

pH

Time



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Common Control Issues



Inaccurate weighing and dispensing

Poor temperature control

Poor pH control

Poor humidity control

No written Standard Operating Procedures

Unlabelled chemicals

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And now the Good News

You've seen the sources of failure

Now Reiner will share information on testing.

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