



CONSTGLASS



Table of results



1- Pilot Object

Pilot object:

The death and assumption of the Virgin, CHARTRES
Bay 42, panel 21

Picture



Identification of the panel:

Bay: 42
Panel: 21
Internal face, transmitted light
Internal face, reflected light

Treatment:


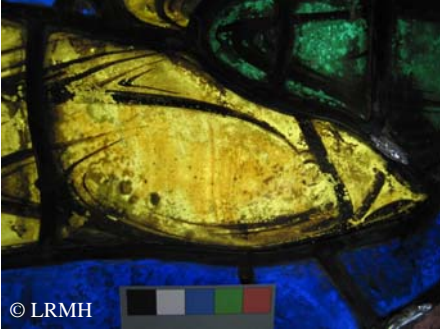

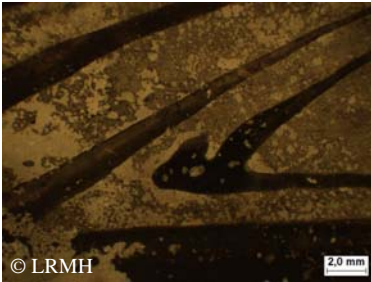
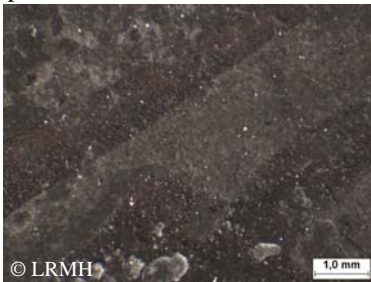
- 1988, by Alliou studio.
- Products: polyurethane resin (80% Viacryl® SM564 + 20% Desmodur® N75), silicone CAF 3 and cold painting.
- Application: with a soft brush after cleaning.






	<h1>CONSTGLASS</h1>	
	<h2>Table of results</h2>	


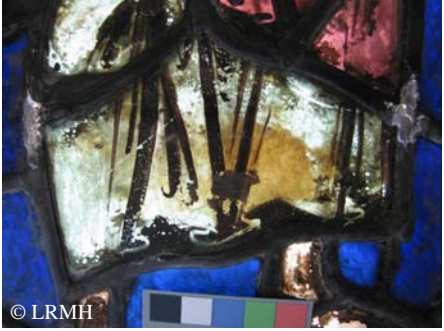

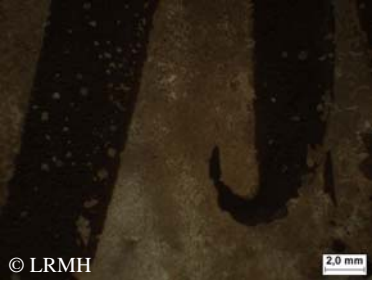
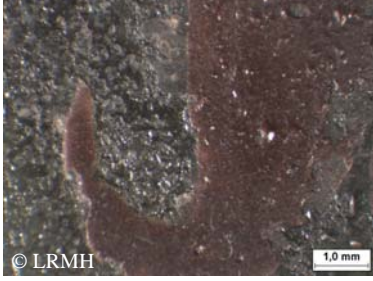
2-Results

Sample reference: *CHA_b42p21_I_v1: yellow glass with Viacryl® consolidation on internal surface*

Questions	Techniques	Answers
<p>Morphology</p> <ul style="list-style-type: none"> - What is the morphology of the weathered coating? - How is the bonding between coating and glass?   <p>© LRMH</p> <p>White rectangle locate the optical microscope observations</p>	<p>Optical Microscope</p>   <p>© LRMH</p> <p>© LRMH</p> <p><i>Detail of internal face, reflected and transmitted light. It is covered by dust and corrosion products, which makes difficult to observe Viacryl® consolidant. On this area, the gaps of grisaille are due to bubbles, probably caused by too much baking. But the rest of the paint seems to be safe.</i></p>  <p>© LRMH</p> <p><i>Detail of glass paint, reflected light.</i></p>	
	<p>SEM</p>	<p><i>Not foreseen in this case: sample hasn't been unstopped.</i></p>
	<p>Desktop tomography</p>	<p><i>Not foreseen in this case: samples too large for tomography system.</i></p>
	<p>Phase-contrast tomography on Synchrotron</p>	<p><i>Not foreseen in this case: samples too large for tomography system.</i></p>
<p>Chemical Composition</p> <ul style="list-style-type: none"> - What is the chemical composition of the alteration products? 	<p>SEM/EDX</p>	<p>On external surface, the white deposit has been sampled. It is calcite coming from the corrosion of the putty.</p>
<p>Organic component composition</p>	<p>FTIR</p>	<p><i>Not foreseen in this case: sampling is not possible.</i></p>
	<p>RAMAN</p>	<p><i>Not foreseen in this case</i></p>
<p>Microbiology</p>	<p>Molecular biology ATP measurements</p>	<p><i>Not foreseen in this case, see sample "microbiology tests" at the end of this data sheet.</i></p>
<p>Reversibility</p>	<p>Test studies Elimination</p>	<p><i>Not foreseen in this case: consolidation is still effective and not dangerous for the grisaille.</i></p>
<p>Re-treatability</p>	<p>Test studies Re-treatability</p>	


	<h1>CONSTGLASS</h1>	
	<h2>Table of results</h2>	

Sample reference:	<i>CHA_b42p20_I_v5: brown glass with Viacryl® consolidation on internal surface</i>
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Questions	Techniques	Answers
<p>Morphology</p> <ul style="list-style-type: none"> - What is the morphology of the weathered coating? - How is the bonding between coating and glass?   <p>© LRMH</p> <p>White rectangle locate the optical microscope observations</p>	<p>Optical Microscope</p>    <p>© LRMH</p> <p>© LRMH</p> <p>© LRMH</p>	<p><i>Detail of internal face, reflected and transmitted light. Same phenomenon as sample v4 and most of the pieces of this panel: the superficial layer of glass is gone, taking with it the grisaille.</i></p> <p><i>Detail of glass paint, reflected light. It is covered by dust and corrosion products, which makes difficult to observe Viacryl® consolidant. On this area, the gaps of grisaille are due to bubbles, probably caused by too much baking. But the rest of the paint seems to be safe.</i></p>
	<p>SEM</p>	<p><i>Not foreseen in this case: sample hasn't been unstopped.</i></p>
	<p>Desktop tomography</p>	<p><i>Not foreseen in this case: samples too large for tomography system.</i></p>
	<p>Phase-contrast tomography on Synchrotron</p>	<p><i>Not foreseen in this case: samples too large for tomography system.</i></p>
	<p>Chemical Composition</p>	<p>SEM/EDX</p> <p><i>Not foreseen in this case: sample hasn't been unstopped.</i></p>
<p>Organic component composition</p> <ul style="list-style-type: none"> - What is its chemical evolution? 	<p>FTIR</p> <p><i>Not foreseen in this case: sampling is not possible.</i></p>	
	<p>RAMAN</p> <p><i>Not foreseen in this case: sample hasn't been unstopped.</i></p>	
<p>Microbiology</p>	<p>Molecular biology ATP measurements</p> <p><i>Not foreseen in this case, see sample "microbiology tests" at the end of this data sheet.</i></p>	
<p>Reversibility</p>	<p>Test studies Elimination</p> <p><i>Not foreseen in this case: consolidation is still effective and not dangerous for the grisaille.</i></p>	
<p>Re-treatability</p>	<p>Test studies Re-treatability</p>	

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Sample reference	<i>Microbiology tests</i>
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Questions	Techniques	Answers
<p>Microbiology</p> <ul style="list-style-type: none"> - Is there a biological contamination? - Is there an active infestation? 	<p>Molecular biology ATP measurements (Microscopical analysis, metabolic activity and taxonomical description of microorganism)</p>	<p>Treatment with VIACRYL® (fine application, in storage):</p> <ul style="list-style-type: none"> - slight accumulation of dust and dirt, no visible fungal infestation; - low metabolic activity (ATP 143 RLU/25 cm²); - isolated microorganisms: none. <p>Only one sample has been made, as a precaution for the grisaille.</p>

Conclusion: the consolidation is still effective on most of the paints of the panel. There is not much corrosion products, but a lot of putty which was not removed during last restoration. The corrosion of the latter is starting or resuming on some isolated areas. On some pieces, the healthy grisaille is taken off by a thin layer of deteriorated glass. The consolidation does not avoid this phenomenon.