

## GNA002

### SAMPLE PREPARATION FOR GNA PIGMENTS FOR SALIVA, PERSPIRATION, RUB FASTNESS AND & pH TESTING

#### AIM OF THE TEST:

To produce samples of the pigments for external testing. The samples need to be prepared in accordance with GNA and Bureau Veritas requirements. **Please note** that these requirements are frequently adjusted - please confirm the method with GNA via the website and Bureau Veritas before carrying out the work.

#### EQUIPMENT:

- Manual printing press (e.g. M&R SIDEWINDER™)
- Quartz Flash Cure Unit (e.g. M&R RED CHILI model D™)
- Dryer (e.g. M&R SPRINT® 2000 SERIES Screen Printing Conveyor Dryer)
- 43T/110 screen
- Woven fabric 100% cotton

#### PROCEDURE:

##### **A. Sample preparation for Saliva, Perspiration and pH testing:**

1. Prepare the screen by masking four areas 10cm x 10cm.
2. Add 5% of the pigment into a suitable base e.g. MagnaPrint® Aquaflex V2 Neutral where it is known the base will comply with GNA requirements.
3. Print using the recommended method from the product's TDS. For example:  
**FABRIC:** White woven 100% cotton  
**SCREEN:** 43T/110  
**PRINTING CONDITIONS:** 2 strokes / flash / 2 strokes / flash / 2 strokes  
**FLASH CONDITIONS:** 4 seconds at 100°C  
**CURING:** at 165°C for 2.5 minutes
4. Cut the fabric so that you have four prints (10cm x 10cm each):
  - a. Pack one of the prints for pH of the print testing
  - b. Pack three of the prints together for saliva and perspiration fastness testing  
*There is no issue with contamination; the prints can be placed in an envelope or a plastic wallet.*
5. Label each print with exact pigment name (same as on the label) and the batch number. Put all into a big plastic wallet and label with the test name (e.g. Saliva & Perspiration fastness testing).

**Please note:** The printing inks also require pH of the fabric testing, however the sample preparation is different for this type of products. Please refer to GNA003 for the procedure.

##### **B. Sample preparation for rub fastness testing:**

1. Prepare the screen by masking an area of 25cm x 25cm.
2. Add 5% of the pigment into a suitable base e.g. MagnaPrint® Aquaflex V2 Neutral where it is known the base will comply with GNA requirements.
3. Print using the recommended method from the product's TDS. For example:  
**FABRIC:** White woven 100% cotton  
**SCREEN:** 43T/110  
**PRINTING CONDITIONS:** 2 strokes / flash / 2 strokes / flash / 2 strokes  
**FLASH CONDITIONS:** 4 seconds at 100°C  
**CURING:** at 165°C for 2.5 minutes
4. Label the prints with exact pigment name (same as on the label) and the batch number. Put all into a big plastic wallet and label with the test name.  
*There is no issue with contamination; the prints can be placed in an envelope or a plastic wallet.*