A study of severe delamination in 
**Nu Féminin** by Jori Smith

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**Introduction**

*Nu Féminin* (1967) is a painting by Jori Smith (1907-2005), a Montreal artist, best known for her portraits of women and children.  
- Severe cupping, tenting, and complete delamination  
- Failure of adhesion between ground layers

This project seeks to investigate the causes of deterioration in *Nu Féminin* through an analytical and technical study. **This poster will discuss the composition of the ground layers their effect on delamination.**

**Archival Research**

- Library and Archives Canada  
- National Gallery of Canada  
- Agnes Etherington Art Gallery  
- Musée National des Beaux-Arts du Québec  
- Leonard & Bina Ellen Art Gallery  
- McCord Canadian Art Collection

**Analytical Methods**

Analysis using non-destructive and minimally invasive techniques.  
- PLM (Reflected light, transmitted light and autofluorescence)  
- ATR-FTIR  
- XRF  
- SEM-EDS (Imaging, Elemental mapping)

**Results & Discussion**

**Preliminary Conclusions**

- The canvas was likely reworked or reused.  
- Ground and paint layers are all oil based.  
- The primary ground is Titanium White and Kaolin based. It does not contain Zinc White.  
- Zn soaps are present in some upper paint layers. (particularly Cd containing reds and yellows)  
- XRF analyses at cleavage interfaces show a Zn containing layer on the underside of delaminating flake. This may indicate a thin layer of Zn soaps, which has migrated through the paint; however, soaps are not present in FTIR of n the ground layer.

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**Selected References**


**SEM-EDS BSE image of sample 7**

**XRF at interface of delamination**

**Cross section from the background, sample 7 in reflected light and autofluorescence (WU). 11 layers.**

**SEM-EDX Elemental Mapping of Zinc, Titanium/Barium*, Calcium, Aluminium, Silicon, Cadmium and Lead for sample 7, a cross section taken from the green background.**

The primary ground is largely composed of Al, Si and Ti, while the secondary ground contains a large concentration of Ca (likely CaCO₃) and Ti. Zn is located primarily in the paint layers and not in the ground.