Diego Rivera's *Cabeza de Tehuana: Tehuantepec* (1930) belongs to the Purdue University Collections. Not only does this painting need to be cleaned in order for the original colors to really shine, but cracks have also developed underneath the paint layer. This is where art history and science combine. Art history helps us to determine the historical and personal context in which the piece was created. This is essential to prevent the restorer from repairing an intentional flaw that could hold strong significance in the purpose of the artwork. Science is then implemented to discover specific materials (pigments, binders, canvas, stretcher, etc.) that make up Rivera's work, and thus decide what solvent to employ with no harm when applied to the surface to remove dirt and grime. Infrared Spectroscopy is executed to determine the organic and inorganic elemental structure of the paint. It requires a sample the size of a micrometer; so small that little to no damage is done to the painting, and produces a graph of different bands and wavelengths that can be classified into different elemental categories. This can help a restorer decide what solvent is not going to adversely affect the paint or varnish layer. The cracks could be repaired by putting the painting on a temporary stretcher and placing it into a humidity regulator. This would relax the paint layer enough for the cracks to lay down creating one non-disruptive surface. This proposed restoration is important because this painting is invaluable to Purdue and art history.

Research advisor Catherine Dossin writes, “Rivera's *Cabeza de Tehuana* is certainly the jewel of our permanent collection. Yet, as Clair's study shows, it needs to be restored. Her treatment proposal, which combines scientific, historical, and artistic considerations, would recover the original colors and prevent further damage, so that the next generations can continue enjoying it.”


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