

# Nanopublication — Computational Image Analysis - AQC0669

by Arnaud Quercy · Tritone (D, G#) - Reflexions 10 · 2024

## Claim 1: Computational Image Analysis - AQC0669

K-means clustering analysis [3] (10 colors) performed on artwork Tritone [1] (D, G#) - Reflexions 10 (AQC0669) [2] by Arnaud Quercy [2] on 2026-02-04. Documentation includes: color families, texture roughness, brightness distribution, spatial coherence.

### CONTEXT

Analysis performed according to MMIDS-CMP-2025 [3] includes four metric categories: (1) Color distribution via k-means (10 colors), (2) Texture analysis using Haralick features, (3) Brightness and contrast measurements, (4) Spatial pattern characterization. Source image [5]: 2268x3402 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	CFD0CD	27.7	white	lightgray
2	C3C8C7	19.2	white	silver
3	D9D9D6	15.6	white	gainsboro
4	8E9DA5	11.1	blue	steel gray
5	9EABB0	9.9	blue	steel gray
6	B5BCBD	7.6	gray	steel gray
7	7E8D95	5.4	blue	lightslategray
8	6E6E70	1.6	gray	grayish purple
9	373535	1.2	gray	darkslategray
10	B0744D	0.7	orange	peru

### Color Families:

#### Family %

white	62.6
blue	26.4
gray	10.3
orange	0.7

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.119
Mean Local Roughness	0.01
Roughness Uniformity	0.012
Edge Density	0.023
Mean Gradient Magnitude	0.096
Gradient Variance	0.023
Gradient Smoothness	0.0
Directional Coherence	0.024
Pattern Complexity	0.115
Pattern Repetition	1.0

### Metric Value

Detail Frequency Ratio	0.598
Spatial Variation	0.086
Texture Consistency	0.408

### BRIGHTNESS & CONTRAST ANALYSIS

#### Metric Value

Mean Brightness	0.74
Brightness Variance	0.119
Brightness Uniformity	0.839
Brightness Skewness	-1.658
Brightness Entropy	6.386
Rms Contrast	0.119
Michelson Contrast	1.0
Weber Contrast	0.312
Mean Local Contrast	0.012
Contrast Uniformity	0.0
Dynamic Range	0.996
Effective Dynamic Range	0.325
Shadow Percentage	1.193
Midtone Percentage	24.713
Highlight Percentage	74.094
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.005
Medium Contrast	0.015
Coarse Contrast	0.027
Multiscale Contrast Ratio	0.205
Edge Contrast	0.096
Contrast Clustering	0.592

### SPATIAL DISTRIBUTION ANALYSIS

#### Metric Value

Spatial Coherence	0.74
Color Clustering	0.59
Color Transition Smoothness	0.76
Transition Uniformity	0.85
Sharp Transition Ratio	0.1
Transition Directionality	0.029
Mean Saturation	0.068
Saturation Variance	0.005
Low Saturation Ratio	0.99
Medium Saturation Ratio	0.01
High Saturation Ratio	0.0
Saturation Clustering	1.0
Hue Concentration	0.412

Metric	Value
Complementary Balance	0.272
Analogous Dominance	0.705
Temperature Bias	-0.411

## Methodology

This analysis employs standardized computational methods for objective image characterization. Color extraction uses k-means clustering algorithm. Texture analysis applies Haralick feature extraction. Brightness metrics include mean, variance, and distribution analysis. Spatial patterns are characterized through coherence and clustering measurements. All methods are deterministic and reproducible. Analysis performed by Multimodal Institute's computational imaging systems.

## REFERENCES

- [1] Arnaud Quercy (2024). Tritone (D, G#) - Reflexions 10 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0669.html>
- [2] Quercy, A. (2024). Tritone (D, G#) - Reflexions 10 - Gallery. [https://artquamanima.com/en/artworks/2024/01/tritone-d-g-reflexions-10\\_7ge.html](https://artquamanima.com/en/artworks/2024/01/tritone-d-g-reflexions-10_7ge.html)

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h  
<https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html>

## EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

## CHECKSUM (SHA-256)

462629fa4ae019d9244271d7109c167583d38ec2d182b-ca4deaa5e608929664f

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