



**CERTIFICATION OF ANALYSIS  
 (Representative Sample)**

**COLORONA BORDEAUX  
 COSMETIC PIGMENT**

<b>ANALYTICAL DATA</b>	<b>SOP's</b>	<b>SPECS</b>	<b>RESULTS</b>
Color and Appearance	Merck KGaA	Conforms	Conforms
Content of Mica * Content of Fe <sub>2</sub> O <sub>3</sub>	Merck KGaA	45.0 -54.0	49.6 %
pH (10 % Suspension)	Merck KGaA	46.0 -55.0	50.4 %
Particle size distribution (80% within 10-60 μm)	ISO 787-9	3.0 -7.0	3.7
Median particle size (D50)	Laser diffraction	Conforms	Conforms
Loss on Drying (2 hrs, 105 degrees C)	Laser diffraction	18.0 -25.0	21.6
<b>Microbial Purity</b>	Merck KGaA	</=0.5	</= 0.5
	USP or EP or JP		
Total Viable Aerobic Count			< 100 CFU/g
E. coli			Absent in 1g
Pseudomonas aeruginosa			Absent in 1g
Staphylococcus aureus			Absent in 1g
Salmonella species			Absent in 10g
Gram negative bacteria			Absent in 1g
Candida albicans			Absent in 1g
<b>Heavy Metals</b>			
	Modified CTFA/Internal		
Arsenic < 2 ppm	Barium < 50 ppm	Cadmium < 3 ppm	
Chromium < 100 ppm	Copper < 50 ppm	Mercury < 1 ppm	
Nickel < 10 ppm	Lead < 10 ppm	Antimony < 1 ppm	
Zinc < 50 ppm			

This material does not contain organic colorants

The color additives in this material meet all applicable purity requirements of the FDA(21 - CFR), the E C and Japan for cosmetic use

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\* Calculated by Difference