The amperometric determination of sulfite was performed using copper electrodes in alkaline media. A mechanism for the oxidation of sulfite at these electrodes is suggested, based on the formation of superficial CuO(*HO), which acted as an electron transfer mediator to the analyte. At 0.5 V versus SCE in 1 M NaOH, sulfite could be calibrated at a sensitivity of 0.2 A l mol⁻¹ cm⁻², with a response time for the steady state of 30 s. The limit of detection (Three times the signal-to-noise ratio) was 2.5×10⁻⁶ M and the response was linear up to 5×10⁻⁴ M \((r^2=0.9996, n=15)\). The standard deviation \((n=10)\) at 1×10⁻⁵ and 1×10⁻⁴ M was 3.27×10⁻⁷ A cm⁻² (mean=3.62×10⁻⁴ A cm⁻²) and 1.07×10⁻¹³ A cm⁻² (mean=2.25×10⁻⁵ A cm⁻²), respectively.