FORMULA 3.818.5

$$\int_0^\infty \frac{\sin^3 x \, \cos x}{(a^2 \, \cos^2 2x + b^2 \, \sin^2 2x)^3} \cdot \frac{dx}{x} = \frac{\pi}{64} \cdot \frac{3a^2 + b^2}{a^3 b^5}$$