NEW FORMULA 3.511.7

The original equation is

$$\int_0^\infty \frac{\sinh ax \sinh bx}{\cosh cx}\,dx = \frac{\pi \sin \frac{\pi a}{2c} \sin \frac{\pi b}{2c}}{c\,(\cos \frac{\pi a}{c} + \cos \frac{\pi b}{c})}$$

The change of variables $t = cx$ and replacing a/c by a and b/c by b yields the new formula

$$\int_0^\infty \frac{\sinh ax \sinh bx}{\cosh x}\,dx = \frac{\pi \sin \frac{\pi a}{2} \sin \frac{\pi b}{2}}{\cos \pi a + \cos \pi b}$$