

**Table** FTIR absorption bands and the possible functional groups of *Sphingomonas* sp. GY2B after treatment with rhamnolipids for 24h and 48 h

Wavenumber (cm <sup>-1</sup> )	Assignment	Functional groups	Main corresponding cellular compounds
3500-3000	Hydroxyl(-OH)		
2450-2300	C-H	Fatty chains	Cellular membranes
1750-1720	$\nu$ C=O	Esters from lipids or fatty acids, Carboxylic groups	Cellular membranes
1658-1650	Amide I ( $\nu$ C=O coupled with $\delta$ N-H)	Proteins	Membranes, cytoplasm, flagella, pili, ribosomes
1567-1540	Amide II ( $\delta$ N-H coupled with $\nu$ C-N)		
1455-1452	$\delta$ CH <sub>2</sub> , $\delta$ <sub>a</sub> CH <sub>3</sub>	Lipids	Cellular membranes
1396-1392	$\nu$ <sub>s</sub> COO <sup>-</sup>	Amino acids, fatty acid chains	Capsule, peptidoglycan
1270-1250	$\nu$ <sub>a</sub> PO <sub>2</sub> <sup>-</sup>	DNA, RNA	Nucleoid, ribosomes
1200-900	N C-O, $\nu$ C-C, $\delta$ C-O-C and $\nu$ <sub>s</sub> C-O-P	Polysaccharide(lipopolysaccharides and peptidoglycan) Phosphodiester, phospholipids,	Capsule, storage, inclusions
1099-1090	$\nu$ <sub>s</sub> PO <sub>2</sub> <sup>-</sup>	phosphorylated proteins or polyphosphate products LPS, nucleic acids	Cellular membranes, Nucleoid, ribosomes
983-860	$\nu$ <sub>as</sub> O-P-O	Phosphoryl groups	Cellular membranes