





<b>Methanol 100%</b>	<b>F31</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
<b>Methanol mild warmed 100%</b>	<b>F32</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
<b>Control (Media + test bacterial strains)</b>		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>EG</b>

**EG: Excellent Growth; NG: No Growth; MG: Moderate Growth; Control: bacterial inoculum alone; ++: Highly growth inhibit; +: Less inhibit; - : More growth**

**Table S2. Antimicroalgal activity of individual column fractions against marine microalgal strains**

Solvents	Fraction codes	<i>Chaetoceros</i> sp		<i>Chlorella</i> sp.		<i>Nannochloropsis</i> sp.		<i>Dunaliella</i> sp.		<i>Tetraselmis</i> sp.		Remarks
		72h	96h	72h	96h	72h	96h	72h	96h	72h	96h	
<b>Hexane- 100%</b>	<b>F1</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
<b>Hexane to Benzene (90:10 to 10:90%)</b>	<b>F2</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F3</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F4</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F5</b>	-	-	-	-	-	-	-	-	-	-	<b>MG</b>
	<b>F6</b>	++	++	++	++	++	++	++	++	++	++	<b>NG</b>
	<b>F7</b>	-	-	-	-	-	-	-	-	-	-	<b>MG</b>
	<b>F8</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F9</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F10</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>Benzene- 100%</b>	<b>F11</b>	-	-	-	-	-	-	-	-	-	-
<b>Benzene to Ethyl acetate (90:10 to 10:90)</b>	<b>F12</b>	-	-	-	-	-	-	-	-	-	-	<b>MG</b>
	<b>F13</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F14</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F15</b>	-	-	-	-	-	-	-	-	-	-	<b>MG</b>
	<b>F16</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F17</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F18</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F19</b>	-	-	+	+	+	+	+	-	-	-	<b>MG</b>
	<b>F20</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>Ethyl acetate 100%</b>	<b>F21</b>	-	-	-	-	-	-	-	-	-	-
<b>Ethyl acetate to Methanol (90:10 to 10:90)</b>	<b>F22</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F23</b>	-	-	-	-	+	+	-	-	-	-	<b>MG</b>
	<b>F24</b>	+	+	+	+	-	-	-	-	-	-	<b>MG</b>
	<b>F25</b>	++	++	++	++	++	++	++	++	++	++	<b>NG</b>
	<b>F26</b>	-	-	-	-	+	+	+	-	-	-	<b>MG</b>
	<b>F27</b>	-	-	+	+	+	+	-	+	-	-	<b>MG</b>
	<b>F28</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F29</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>F30</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
	<b>Methanol 100%</b>	<b>F31</b>	-	-	-	-	-	-	-	-	-	-
<b>Methanol mild warmed 100%</b>	<b>F32</b>	-	-	-	-	-	-	-	-	-	-	<b>EG</b>
<b>Control (Media + test microalgal strains)</b>		-	-	-	-	-	-	-	-	-	-	<b>EG</b>

EG: Excellent Growth; NG: No Growth; MG: Moderate Growth; Control: Individual microalgal inoculum alone.

**Fig. S1.** Antibacterial properties of active Spot by TLC autobiography method

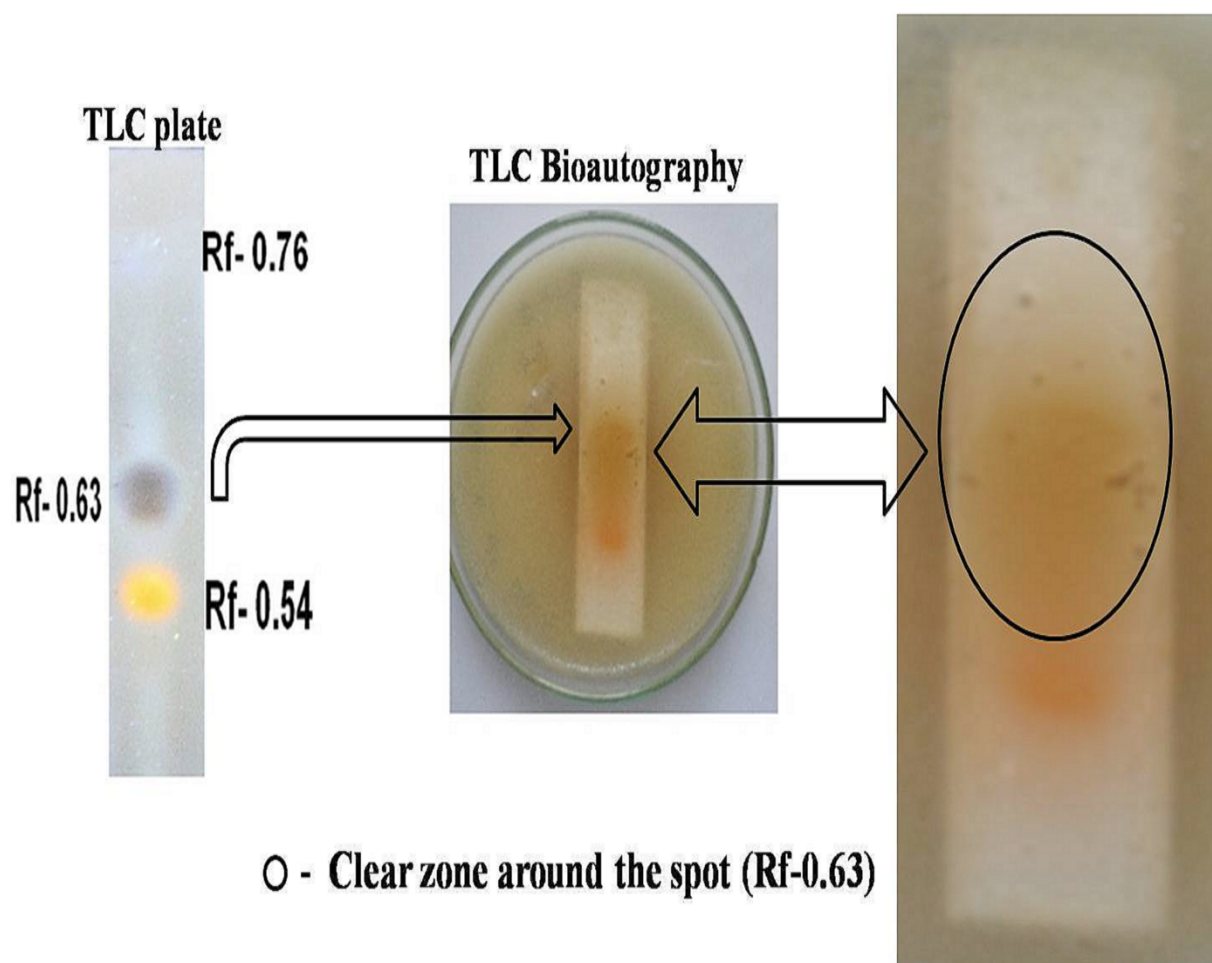


Fig. S1. FTIR analysis of bioassay guided fraction (24<sup>th</sup>) of *S. fradiae* RMS-MSU

