

3480 Revised page 64 of your lab manual - replace old page with new DATA.

Table 2. Selected C ₄₀ carotenoids present in <i>Erythromicrobium ramosum</i> .				
Carotenoid Group	Carotenoid		Absorbance maximum ^a (nm)	Comment
bicyclic	β-carotene		(426), 454, 480 ¹	
	β-carotene hydroxyl derivatives	tetra hydroxy β,β-carotene-4-one	456, 477	major component
		zeaxanthin	(428), 454, 482 ²⁰	
		adonixanthin		
		caloxanthin		
		nostoxanthin		
monocyclic	bacteriorubixanthinal	492	major component	
acylic	spirilloxanthin			
polar	erythroanthin sulfate	459, 477	major component	

^a The absorbance maxima are given for acetone extracted carotenoids. If there are multiple peaks characteristic of a pigment, they overlap, often presenting only as a shoulder peak. Peak maxima may differ slightly depending on the impurities present.

The expected relative distance migrated and carotenoid pigment color for bacteria investigated in this lab (Table 3).

Table 3. Aerobic anoxygenic phototrophic bacteria carotenoid migration distance and color on TLC using solvent system petroleum ether:diethyl ether:acetone:methanol (40:10:15:3). Solvent front 1 cm from end, ie. 155 mm.			
Bacteria	Major Carotenoids	Distance migrated ^a (mm)	Carotenoid color
strain ML36	carotene derivative	125	yellow
	unknown	51	pale orange
<i>Roseococcus thiosulfatophilus</i>	carotenedioate	104	yellow
	diglycosyl carotenedioate	31	rosy-orange
<i>Erythromicrobium ramosum</i>	bacteriorubixanthinal	104	red
	tetra hydroxy β,β-carotene-4-one	94	gold
	erythroanthin sulfate	82	orange

^a Amount of sample loaded and subjective estimate of distance migrated by a broad band affects the distance migrated. Therefore, distance migrated may differ slightly from assay to assay.