Selective Enrichment and Isolation of *Rhodopseudomonas Palustris* using Para-Aminobenzoic Acid as Selective Agent

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Abstract—*Liquid enrichment cultures for anoxygenic phototrophs capable of using para-aminobenzoic acid (PABA) as organic carbon source selectively yielded the nonsulfur purple bacterium Rhodopseudomonas palustris. Pure cultures of R. palustrisobtained from the enrichments grew both photoheterotrophically and chemoheterotrophically on modified PMSY media containing 0.01% w/v PABA. Screw cap test tubes (10 mL) were filled fully with broth and used for photoheterotrophic culture whereas glass jars (500mL) were used for chemoheterotrophic growth with 20% empty headspace in order to provide oxygen. Both types were incubated at room temperature (27-29°C) under constant light from a 45 watt cool fluorescent bulb placed at 6 cm distance. Rhodopseudomonas palustris was identified by its characteristics purple-red coloration that appeared in 4 days; and its ability to utilize PABA, a feature which has been used to distinguish it from other species of Purple nonsulfur bacteria, where two other capable species are from Rhodocyclus and Rhodospirillum genus.*