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Regulation of menaquinone production in *Desulfovibrio vulgaris* Hildenborough and *Desulfovibrio desulfuricans* strain G20

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Menaquinones are cytoplasmic membrane components that have important roles in electron transport for energy generation in anaerobic bacteria. A simple and sensitive protocol for the purification and quantification of menaquinones from the sulfate-reducing anaerobes *Desulfovibrio vulgaris* Hildenborough and *Desulfovibrio desulfuricans* strain G20 has been established. This method was used to determine whether differences occurred in menaquinone production in cells grown by fermentation when compared with those grown by respiration. Purified menaquinone extracts from both species were analyzed using thin-layer chromatography, UV absorption spectroscopy, and high-performance liquid chromatography. It was observed that each species possesses the same two menaquinones but the ratio between the two menaquinones differed in each species. The effects of alternate growth modes on the menaquinone content of the cells is being explored. Methods to further characterize and identify the two menaquinones is currently in progress.