

JACOB BRADSHAW

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Industrial scientist with 4+ years of experience in a variety of biotechnological applications, including culturing and genetic engineering of anaerobic organisms.

Experience

Trelys, Hayward, California

Research Associate (July 2015-Present)

- Worked closely with the director of bioscience to develop a strain development lab focused on anaerobic, gaseous substrate microbiology
 - Thorough knowledge of aseptic and anaerobic technique
 - Assisted in development of standard operating procedures for lab safety involving working with explosive and toxic gases as well as SOPs for media and process optimization
 - Individually designed and constructed numerous new strains using techniques such as PCR, gel electrophoresis, transformation, restriction digestion, and in fusion cloning
- Performed analytic chemistry assays to detect presence and concentration of various compounds including,
 - Sample preparation for HPLC, GC, and ICP-OES machines
 - Making of mobile phases for HPLC
 - Running and maintaining multiple HPLC machines
 - Analyzing peak shifts and manually correcting integration when necessary
- Assisting the fermentation and engineering department in operation and optimization of benchtop fermenters
 - Preparing and analyzing seed inoculums for fermenters
 - Cleaning and sterilizing bioreactors
 - Identifying contaminants through optical microscopy
 - Sampling of fermenters for uses of dry cell weight, optical density, and harvesting supernatants for titer analysis
 - Reading and analyzing chromatograms for determining trends in specific and volumetric productivity