

BRIEF ABSTRACT OF WEIZMANN TOPIC THAT ORIGINALLY STARTED MY STS RESEARCH

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Preparations for WW I required smokeless gunpowder for the latest dreadnought battleships and warfare tactics. Acetone was a key ingredient. Churchill gave carte blanche to Weizmann to scale-up his laboratory corn starch fermentation process to 30,000 tons / year. Local distilleries purified the product and even school children gathered chestnuts as another source of starch. Eventually, 11 tons of acetone were achieved from 100 tons of grain and was the first use of bacterial fermentation for large scale production of acetone. The British thanked Weizmann with the Balfour Declaration concerning establishing Israel and he became its first President. Government took notice of the impact of science and scientists took notice of their new found power and influence. Specific details will be presented on this industrial fermentation process and on how it directly contributed to the modernization of the British navy. During WW II, Weizmann continued his fermentation research on production of high-octane aviation fuels and synthetic rubber. Fermentation today remains of current and historical interest with respect to gasohol and as a significant component in pharmaceutical and other industries.