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## **Analytical Chemistry – The Hub To Chemistry – The Wheel**

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When a man is tired of Chemistry he is tired of his life since there is everything in chemistry that life requires, the requirements being, food, clothing and shelter, these 3 in turn are associated with materials, natural or man-made. Chemistry hence may be considered as the wheel. The branch of Science, Chemistry, chiefly is concerned with materials involving matter-matter and matter – energy interactions. Both these will result in new products more sought after by man for better living and life style as time passes. Have you got Purity (quality), quantity and cost benefit in getting the new product, if not go to Analytical Chemistry. It may not be out of place to recall two representative stories in this regard: Aristotle ‘s“Eureka” (in finding the purity of the King’s crown) and Haber’s Ammonia synthesis to augment the short supply of the basic agricultural input, namely, fertilizer to Germany, during the 1<sup>st</sup>World War.

Till 1888 Chemistry is Analysis and Analysis is Chemistry. Analysis till then is mostly empirical and largely experimental. The very recent article in ACT Newsletter, May-august, 2017 titled ‘Third eye of 21st Century Chemistry’ (TeCh)” by one of the computational chemistry experts, Prof. R. Sambasivarao, is an excellent review of chemistry topics from the angle of measurements and computations in a comprehensive bird’s eye way. The expression measurement is very closely linked to Analytical Chemistry, which has evolved from Aristotle’ Eureka to the latest computer controlled processes and computer based Data analysis leading eventually to KID (as outlined by Prof. Sambasivarao). Measurement and Computation are two basic aspects of analytical chemistry. Of late quality aspects crept into analytical measurements and data analysis. This led to introducing the 3R’s Readability, Repeatability and Reliability also as supplementary to sensitivity, selectivity and specificity. In order to keep abreast of the fast changing trends, we may have to refresh our knowledge of Analytical Chemistry. Let me go about this aspect in a concise and more compact manner. The first step is the definition of goal; representative examples to highlight this aspects are: gypsy moth devastation of farm land produce, fluoridation of water supply, motor oil/transformer oil to identify the wear and tear of the engine/transformer etc.,