INTRODUCTION

An Egg has been a part of human diet since ages. Yet it still doesn’t fascinate the research Analytical Scientist, Dietician even a common man. Egg yolks store a lot of oil and lecithin and whole eggs, also protein.\textsuperscript{[1,2]} For this reason, the USDA (United States Department of Agriculture) categorizes eggs within the Food Guide Pyramid\textsuperscript{[1]} Popular choices for egg consumption are chicken, duck, roe, and caviar. The egg most often humanly consumed by far is the produce of the chicken.

Many vaccines for infectious diseases are produced in fertile chicken eggs. The basis of this technology was the discovery in 1931 by Alice Miles Woodruff and Ernest William Good pasture at Vanderbilt University that the rickettsia and viruses that cause a variety of diseases will grow in chicken embryos. This enabled the development of vaccines against influenza, chicken pox, smallpox, yellow fever, typhus, Rocky mountain spotted fever and other diseases\textsuperscript{[3]}. The use of these vaccines is accepted after a set of promising development in field of research help the technique reach a scientific validation and also the achieving standards of the pharmaceutical formulation.

They supply all essential amino acids for humans,\textsuperscript{[4]} and provide several vitamins and minerals, including vitamin A, riboflavin (vitamin B\textsubscript{2}), folic acid (vitamin B\textsubscript{9}), Vitamin B\textsubscript{6}, Vitamin B\textsubscript{12}, Choline, Iron, Calcium, Phosphorus and Potassium. They are also an inexpensive single-food source of protein.

The yolk makes up about 33\% of the liquid weight of the egg; it contains approximately 60 calories, three times the caloric content of the egg white. The yolk of egg contains protein, cholesterol, carbohydrates and total fat. (USDA National Nutrient Database) All of the fat-soluble vitamins (A, D, E, and K) are found in the egg yolk. Egg yolk is one of the few foods naturally containing vitamin D\textsuperscript{[5]}.

Recently, chicken eggs that are especially high in omega 3 fatty acids have come on the market. These eggs are made by feeding laying hens a diet containing polyunsaturated fats and kelp meal. Nutrition information on the packaging is different for each of the brands \textsuperscript{[6]}. It also contains all of the Choline, and one yolk contains approximately half of the recommended daily intake. Choline is an important nutrient or development of the brain, and is said to be important for pregnant and nursing women to ensure healthy fetal brain development.\textsuperscript{[7]}
The acceptance to an egg constituent’s formulation in India is still to take a leap yet the use of this natural source of drug, and the use remains at the reflexes in almost all homes in the entire world. The nutrient density of eggs makes them a valuable contributor to the overall nutritional balance of the diet and, as an economical source of high quality protein, an important component in the diets of the elderly, low-income families, growing children and people limiting calories for weight loss purposes. As a high protein food, eggs appear in a food group with beef, poultry, fish, legumes and other animal and vegetable protein sources on the Food Guide Pyramid. They are well recognized among consumers as a top source of protein. Certain groups of consumers, namely athletes, may place great importance on protein. Yet a dichotomy exists as to the proper balance of protein and carbohydrates among athletes. Peter W. R. Lemon discusses the need to educate athletes about dietary protein, given that their protein needs are greater than those of their inactive peers. This discussion helps put dietary protein in perspective for various groups of consumers. More recently, research has shown that eggs supply significant amounts of carotenoids that may play a role in disease prevention. Jeffrey Blumberg and colleagues have demonstrated that eggs are a source of highly bioavailable forms of the carotenoids lutein and zeaxanthin. These antioxidant-like compounds have been shown to help in the prevention of macular degeneration, a leading cause of blindness in the elderly, and have been associated with lower risk of cataract extraction. Consumers may not yet be aware that egg yolks are rich in highly bioavailable forms of both these antioxidants, nor that these antioxidants convey potential health benefits.

Eggs can be classified as a functional food, a hot button for today’s consumer. Definitions of ‘functional foods’ have been put forth by several organizations. According to the Institute of Food Technologists, functional foods provide additional physiological benefit beyond that of meeting basic nutritional needs. The International Life Sciences Institute of North America further specifies that functional foods have physiologically active components that give them their functional properties. The American Dietetic Association (ADA) defines several categories of functional foods, among them, unmodified whole foods with physiologically active components. Whole foods that have not been enriched or...
fortified with functional ingredients fit ADA’s definition. Among the foods cited by ADA as functional whole foods are tomatoes for their lycopene, tea for its polyphenols and fermented dairy products for their probiotics. The position of ADA recognizes that ‘functional foods’, including whole foods and fortified, enriched, or enhanced foods, have a potentially beneficial effect on health when consumed as part of a varied diet [11].

Eggs are great for the eyes. According to one study, an egg a day may prevent macular degeneration due to the carotenoid content, specifically lutein and zeaxanthin. Both nutrients are more readily available to our bodies from eggs than from other sources. In another study, researchers found that people who eat eggs every day lower their risk of developing cataracts, also because of the lutein and zeaxanthin in eggs. One egg contains 6 grams of high-quality protein and all 9 essential amino acids. According to a study by the Harvard School of Public Health, there is no significant link between egg consumption and heart disease. In fact, according to one study, regular consumption of eggs may help prevent blood clots, stroke, and heart attacks. They are a good source of Choline. One egg yolk enough Choline as it’s an important nutrient that helps regulate the brain, nervous system, and cardiovascular system. They contain the right kind of fat. New research shows that, contrary to previous belief, moderate consumption of eggs does not have a negative impact on cholesterol. In fact, recent studies have shown that regular consumption of two eggs per day does not affect a person's lipid profile and may, in fact, improve it. Research suggests that it is saturated fat that raises cholesterol rather than dietary cholesterol. Eggs are one of the only foods that contain naturally occurring vitamin D. [12]

Thus the egg yolk seems to be a promising natural source to work for better fractions and better use.