

## KNOW THE COMMON SUBSTANCE: TABLE SALT (Sodium chloride, NaCl)

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The earliest record of salt usage was about 4,700 years ago in ancient China, where more than 40 different types of salt were available.<sup>1</sup> Ancient documentations were also found in Egypt around 4000BC, followed by Greece and Rome.<sup>2</sup> In ancient Rome, salt was used as a currency and it is believed that the English word "salary" actually originated from the Latin (*salarium*, meaning a payment made in salt).<sup>1,2</sup>

The chemical name of common table salt is sodium chloride (NaCl), which appears as white isometric cubic crystals (Figure 1). Natural salt is harvested from salt water, either the sea or salt springs, by evaporation. The commonest use of salt is for flavouring in cooking. Other usage of salt in the community includes the use of salt to produce fermented food and inhibit bacteria and fungal growth.<sup>1,2</sup>

Salt is also one of the primary electrolytes in the human body. Excessive sodium (hypernatremia) or insufficient sodium (hyponatremia) leads to various illness presentations. Excessive salt intake is associated with hypertension. Research has found that people with high-normal blood pressure who significantly reduced dietary salt intake can reduce the risk of cardiovascular disease by 25% over the following 10 to 15 years and the risk of dying from cardiovascular disease is reduced by 20%.<sup>4</sup> Excessive sodium is also associated with left ventricular hypertrophy and kidney diseases.<sup>4,5</sup>

The United Kingdom Scientific Advisory Committee on Nutrition (SACN) recommended dietary salt intake is 4 grams per day or 70 mmol sodium.<sup>3</sup> The dietary guideline in United States recommend consumption of less than 2.3g of sodium per day (approximately 1 teaspoonfull of salt).<sup>6</sup>

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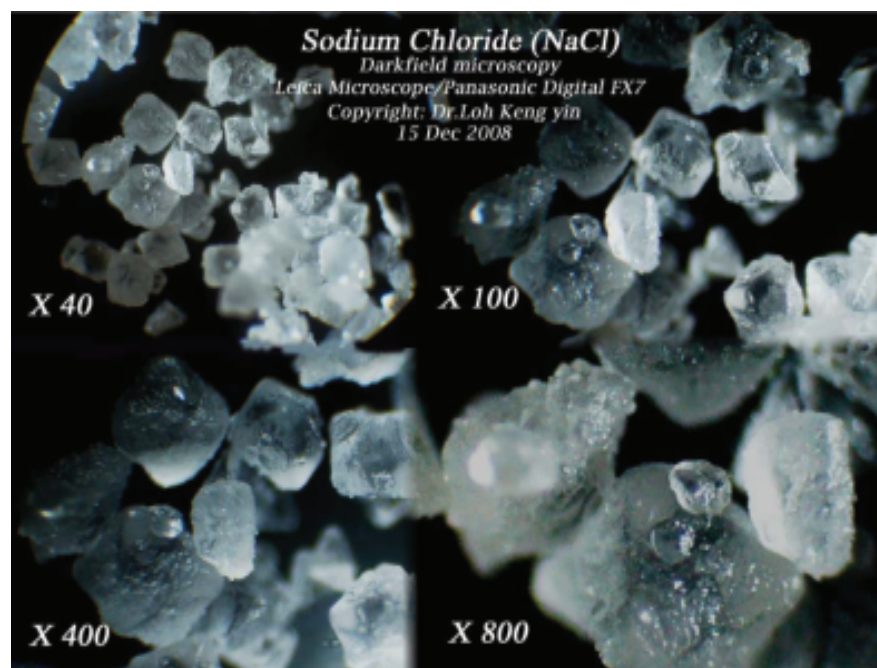


Figure 1: Microscopic appearance of table salt (NaCl). Original photograph by the author.