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Bath and shower products

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2.1 INTRODUCTION

For centuries bathing has been performed not only to cleanse the body but also for the therapeutic and relaxing properties of hot water and steam, particularly at spas and springs where the water contains dissolved minerals. Home bathing (and the consequent development of bath products) is comparatively recent; except for the well-off, bodies were washed communally in rivers and lakes or, as in the case of the Romans and Victorians for example, in specially-built public baths.

The industrial revolution made regular bathing for all both a perceived necessity, because of a growing awareness of the need for personal hygiene, and possible, because of the availability of enamelled metal baths and home plumbing. The detergent used was soap and it was not until the invention of modern foaming and cleansing agents (commonly known as detergents, technically known as surface active agents, or surfactants) that this section of the toiletry industry developed rapidly. Later, a much faster method of body cleansing – showering – was developed which needed the availability of modern surfactants to produce effective washing products.

Modern bath and shower products are used to cleanse the hair and body, anoint the skin with emollients and fragrance and soften the water, especially to eliminate the hard-water ‘ring’ formed around the bath at water level. They are produced in crystal, powder and liquid form and each of these preparations will be discussed individually. Aerosol products have also been prepared in the past, but since more environmentally acceptable formulations are preferred today, this type of product is not discussed here.

The recipes which are quoted below are intended to be the starting point for formulators to produce their own variations according to the restraints and requirements set by their own organization. As with all toiletry products, the formulator must take full responsibility for the
safety as well as the efficacy of the intended product. It is essential to bear in mind that bath products come into contact with almost the whole of the body including the sensitive anogenital region.

2.2 BUBBLE BATH PRODUCTS

Bubble bath products are sometimes called foam bath products, and their names frequently shortened to 'bubble bath' or 'foam bath'. They are also called 'creme bath' (for opacified products), 'herbal bath' (or similarly, where a particular additive is employed) and 'foaming bath oil'. For convenience, they will all be referred to here as bubble bath.

A bubble bath is a dispersion of a highly-foaming material in water. Soap, the oldest and cheapest foaming agent, is not very soluble nor effective in the bath because, in the presence of hard water, soap molecules (usually sodium salts) are converted by double decomposition to insoluble, non-foaming soaps (i.e. lime soaps, calcium and magnesium salts of fatty acids). These deposit on the water surface to produce scum and on the bath surface at water level to produce, in association with soil and other insoluble matter, the well-known bath 'ring'. At bath dilutions soap also partially hydrolyses to produce insoluble fatty acids which contribute to the scum and which are defoaming agents.

It is likely that some people use a few millilitres of hair shampoo in the bath to create some foam and reduce the formation of scum. The advantages of a properly formulated bubble bath are: it is safe on skin and mucous membranes, can produce copious foam (even in hard water areas), will leave the skin with a soft, velvety feel, and fill the bathroom with a pleasant aroma. A shampoo is not designed to cleanse the whole body (bar soap is normally still used for this), requires film-forming or humectant conditioning agents and is expected to foam in the presence of high levels of sebum, a factor not relevant to bubble baths. Bath products usually contain more fragrance than shampoos, reflecting that they are more than purely functional products. Whether bubble bath products are useful and more than just recreational products is a moot point. They do have one important point in their favour – they prevent or reduce the formation of the scum and the ring around the bath because most modern synthetic detergents are good lime-soap dispersing agents.

2.2.1 Ingredients

It is not possible here to write more than a few words on each of a selection of substances from the vast range of surface-active agents, and to give more than a very elementary and generalized explanation of the physical chemistry of foaming agents. The interested reader looking for