

Frequently Asked Questions about Deodorizing Thread and its Applications

[2] About Body Odors and Other odors (1/3)

2-1. Body Odors	
2-1-1	<p>What is "Body odor"?</p> <p>In a wide sense, "Body odor" means the odor which is released from human body. It includes all kinds of odors, that is, the odors which originate from the inside of the body such as "Excrement odor" and "Bad breath", and the odors which originate from the surface of the body such as "Sweat odor".</p> <p>In a narrow sense, "Body odor" means the odor which is released from the surface of the body.</p> <p>In general, "Body odor" indicates "Sweat odor" which were caused by secretions from sweat glands of the skin.</p>
2-1-2	<p>What are the components of Sweat odor?</p> <p>Although the components of Sweat odor vary a little with the spot where Sweat odor is produced, the major components are Ammonia, Acetic acid, Nonenal and Isovaleric acid.</p>
2-1-3	<p>How is Sweat odor produced?</p> <p>The components of Sweat odor are produced by the oxidization of the components (urea & fatty acid, etc.) of sweat and the components (keratin, etc.) of dead skin surface. Also, the components of sweat and dead skin surface are decomposed by bacteria on the skin surface, and changed to odor components.</p>
2-1-4	<p>I've heard that there are various kinds of sweat. What kind of sweat we have?</p> <p>There are three kinds of sweat according to the glands of the skin; the sweat secreted directly on the surface from Eccrine gland, the sweat secreted through a pore from Apocrine gland and the sweat secreted through a pore from Sebaceous gland.</p>
2-1-5	<p>What is the sweat secreted from Eccrine gland?</p> <p>The sweat from Eccrine gland is secreted for the purpose of regulation of body temperature. 99% of the sweat is water, and the rests are minerals (sodium, potassium, calcium, magnesium, etc.), urea and fatty acids. Eccrine glands are distributed over the whole human body.</p>
2-1-6	<p>What is the sweat secreted from Apocrine gland?</p> <p>When a human gets nervous or excited, the sweat is secreted from Apocrine gland. It contains a lot of fatty acids, protein, sugar content, urea, etc.. Apocrine glands are distributed in the limited spots of the human body such as the armpit, the groin, the head, around the nipple and around the navel.</p>
2-1-7	<p>What is the sweat secreted from Sebaceous gland?</p> <p>The sweat which is secreted from Sebaceous gland is called sebum, which contains some kinds of unsaturated fatty acids. Sebaceous glands are distributed over the whole human body except the palm of the hand and the sole of the foot.</p>
2-1-8	<p>Exercise makes a human perspire over the whole body. However, the spots where strong body odors are released are limited to the armpit, the head, the neck and the sole of the foot for example. How does such a difference come?</p> <p>The sweat itself does not smell just after being secreted. However, when it is changed in quality to odor components afterward, body odors are released. Therefore, the spots where strong body odors are released are;</p> <ol style="list-style-type: none"> (1) Spot where the sweat containing a lot of urea and fatty acids is secreted - the armpit, the groin, the head, etc. (2) Spot where a lot of sweat are secreted - the sole of foot, the neck, etc. (3) Spot where dead skin surfaces are peeled off easily and a lot due to metabolism - the head (4) Spot where bacteria are propagated easily – the sole of foot, the head, etc.
2-1-9	<p>What are the causes of odor from the head?</p> <p>The odors from the head are "Head hair odor" and "Head skin odor".</p>
2-1-10	<p>What is "Head hair odor"?</p> <p>"Head hair odor" is the unpleasant smell which is released from the hair of the head. As the hair has the porous structure which absorbs odor molecules easily, it catches the components of Tobacco odor and other odors in the air, and then releases them in the air afterward.</p> <p>"Head hair odor" can be removed from the hair by shampoo.</p>

[2] About Body Odors and Other odors (2/3)

2-1. Body Odors	
2-1-11	<p>What is “Head skin odor”?</p> <p>The components of “Head skin odor” are produced by the oxidization of the dandruff which is mixed with dead skin surface and fat acids. In addition, as the dandruff tends to contain water, it makes bacteria propagated easily. Those bacteria compose dandruff and change them to odor components. This is “Head skin odor”.</p>
2-1-12	<p>What are the causes of strong odor from the armpit?</p> <p>Three kinds of sweat glands are distributed in the armpit. The components of Sweat odor are produced by the oxidization of the sweat components (urea & fatty acid, etc.). Also, the sweat components are decomposed by bacteria on the skin surface, and changed to odor components. Especially, as the sweat secreted from Apocrine gland contains a lot of fatty acids, protein, sugar content, urea, etc., strong odors are released.</p>
2-1-13	<p>What are the causes of odor from the sole of the foot?</p> <p>It is said that the sole of the foot is one of the spots where a human perspires the most because Ecrrine glands are densely distributed. It is also said that a human perspires a cup of sweat a day in both feet. Although the component rate of the substance which causes sweat odor is only 1%, its volume increases as the volume of sweat increases. Furthermore, since the humidity inside of a shoe becomes higher due to airtight space, it makes bacteria propagated easily. Under these conditions, strong odors are produced and released from the sole.</p>
2-1-14	<p>What is “Aged-body odor” (“Karei-shu”)?</p> <p>“Aged-body odor” is one kind of Sweat odors. It is often observed that people in the middle age group release it.</p> <p>In 2000, it was found by researchers of Japanese cosmetic manufacturer that the major component of “Aged-body odor” is Nonenal. According to the report, the older a human becomes, the more Nonenal is produced on the body. That’s why it is called “Karei-shu” in Japanese, which means “Odor that tends to increase with aging”.</p> <p>[Reference] “2-Nonenal Newly Found in Human Body Odor tends to Increase with Aging”, Journal of Investigative dermatology (2001) 116: 520-524. PMID 11286617.</p>
2-1-15	<p>How does “Aged-body odor” smell?</p> <p>The major component of “Aged-body odor” is Nonenal. It is said that it smells like a candle, cheese or an old book.</p>
2-1-16	<p>How is “Aged-body odor” produced?</p> <p>The oxidization of unsaturated fatty acids by lipid peroxides produces the major component of “Aged-body odor”, that is, Nonenal. Both of fatty acids and lipid peroxides are secreted from sweat glands. And, as the oxidization control in the body becomes weaker from around the age of 40 years, lipid peroxides increase year by year. In accordance with its increase, “Aged-body odor” becomes stronger.</p>
2-1-17	<p>From what age is “Aged-body odor” observed?</p> <p>The report (*) says, the major component of “Aged-body odor” Nonenal was detected in the odor of 40-year-old or older people, and was not detected in the odor of twenties and thirties. Therefore, it can be said “Aged-body odor” will be observed from forties.</p> <p>(*) Refer to the answer to the question 2-1-14.</p>
2-1-18	<p>Is there any difference in “Aged-body odor” between male and female?</p> <p>Without distinction of sex, Nonenal is produced from fatty acids secreted from sweat glands. However, little Nonenal is detected in the body odor of women before menopause. This is because Estrogen (a kind of hormone) controls the oxidization in the body.</p>

[2] About Body Odors and Other odors (3/3)

2-2. Other Odors	
2-2-1	<p>What is "Pet odors" of dogs and cats?</p> <p>The sweat odor of mammals like dogs and cats contains the almost same components as the human's sweat odor from the armpit. Most of their sweat glands are Apocrine glands, which are distributed over the whole body. It is also said their sweat from Apocrine glands functions as sex pheromone to attract the opposite sex.</p> <p>In addition, Excrement odor of a pet is sometimes mixed with its sweat odors.</p>
2-2-2	<p>What are the components of "Excrement odor"?</p> <p>The major components of Excrement odor are Ammonia, Acetic acid, Methanethiol (Methyl mercaptan), Hydrogen sulfide, Indole, Skatole and Tryptamine.</p>
2-2-3	<p>What are the components of "Garbage odor"?</p> <p>The major components of Garbage odor are Hydrogen sulfide, Methanethiol (Methyl mercaptan), Trimethylamine and Ammonia.</p>
2-2-4	<p>What are the components of "Tobacco odor"?</p> <p>The major components of Tobacco odor are Ammonia, Acetic acid, Acetaldehyde, Pyridine and Hydrogen sulfide.</p>