

Seven Essences Necessary for Experts at Risk Communication

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<Summary>

At occurrences of a disaster or a social event, importance of risk communication has often been pointed out. In this paper, using an episode regarding a dialogue with a friend about risks of radionuclides in foods and drinking water as well as a traffic accident, I discuss seven essences necessary for experts and information providers in risk communication: 1) risk assessment, 2) differentiation between risk acceptance and risk trade-off, 3) understanding of differences in risk quality, 4) understanding of frame in a sense of values, 5) attention on coping with too high risks, 6) build-up of trust, and 7) a full consideration of the way providing the information. Furthermore, I mention the dual natures in risk communication as experts and humans.

Injured Bacteria and Their Significance in Microorganism Control of Foods

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<Summary>

Sterilization and decontamination of food-borne microorganisms of foods and their materials have been carried out widely, but mild treatments have recently been applied to minimize harmful effects of those processes on food quality. Under these conditions injured cells may often appear. The resultant survival of those cells may depend upon the degree of the stress in the treatments and conditions after the treatments and the cells able to revive are called sublethally injured microbes. This review deals with bacteria as objective microorganisms and as two models of the appearance of injured cells, one is only for sublethally injured bacteria and the other is for both sublethally and lethally injured cells and further contains recovered cells, are proposed.

As a possible method of detection and enumeration of sublethally injured cells, cultivation methods such as classical double plate counting (differential subculture) method using a selective medium and the resuscitation method using a liquid medium before plating on an agar medium have been widely used. On the other hand, noncultivation method such as the differential staining method as a rapid method using two different types of fluorescent dyes has recently been distributed. In heat-injured cells of *Escherichia coli*, multiple sites such as DNA, RNA, enzymes and proteins, and cell membranes are known to be injured, and therefore mode of cell injury varies with not only factors during the treatment but also factors before and after the treatments. In cells recovering from injury after the treatment, the regeneration and syntheses of injured molecules, especially stress response systems (the heat shock and the envelope stress responses in case of heated cells of *E. coli*) may occur and play key roles for the resultant cell survival. In addition, it should be noted that such recovering cells become in general more tolerant to the subsequent secondary lethal stress treatment than the original intact cells, probably due to the functions of the above stress responses. Finally, based upon these behaviors and modes of cell injury and repair, the characteristics of injured bacteria are summarized.

Packed Chilled Foods and Associated Microorganisms in View of Establishing Microbiological Safety and Its Evaluation

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<Summary>

Aiming for understanding the actual conditions of viable bacteria counts of pouched chilled foods as being domestically distributed at 10°C and under, the market survey was conducted. Many varieties of pouched chilled foods, most of which were purchased at convenience stores were used as samples. We counted viable bacteria numbers in them shortly after they were purchased and after having been stored after the use-by date. We also conducted 60 days constant-temperature test at 20°C for those samples. As for those that were found in the viable bacteria counts, gene analyses were carried out to identify the bacteria strains. As to samples in which spore forming bacteria was identified the minimum growing temperature and the spore's thermal resistance were also investigated. Based on the survey on viable bacteria counts of chilled foods, the microbiological standards were proposed.

Nutrition Japan Public Private Platform (NJPPP)

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<Summary>

Nutrition Japan Public Private Platform (NJPPP), which was established on September 13th, 2016 is a framework to mobilize public and private partnerships (all Japan) for nutrition improvement projects. Its goal is to build business models that promote a nutrition improvement in emerging and developing countries. I had a chance to participate in the TICAD VI side event, which was held in Nairobi, Kenya from August 26th to 28th, 2016 in order to get an international movement of nutrition improvement and introduce this platform.

In order to facilitate the active involvement of private companies as a project leader, we have already established a model business (Workplace nutrition in Indonesia), and conducted field investigation in Indonesia from November 13th to 22nd, 2016.

Based on the information gathered in Indonesia, we plan to facilitate specific projects and disseminate information on our achievement to the world in the Tokyo 2020 Olympic and Paralympic Games.

Report of the 38th Session of the Codex Committee on Nutrition and Foods for Special Dietary Uses

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<Summary>

The 38th Codex Committee on Nutrition and Foods for Special Dietary Use (CCNFSDU) was held in Hamburg, Germany from 5 to 9 December 2016. The Committee agreed the following matters.

- (1) Matters for CAC40 adoption and for their information
 - Proposals to amend section 6 (para33) of the nutritional risk analysis principle (Procedural Manual), and paragraphs 3.1 and 3.2 of the Guidelines on Nutrition Labelling (CAC / GL 2-1985). [Agenda 2]
 - Proposals relative to appropriate use of the term “flavourings” in the four standards (CODEX STAN 73-1981, 74-1981, 156-1987, CAC / GL 8-1991). [Agenda 2]
 - Vitamin E dietary equivalent and NRV-R of vitamin D (step 5/8), and vitamin E (step 8). [Agenda 4a, 4b]
 - Analytical methods for vitamin B12, total fatty acids, myo-inositol, vitamin E in the CODEX STAN 72-1981. [Agenda 11]
- (2) Matters of each agenda (step 4)
 - Not to include the ELISA G12 method for analytical method of “Standard for Food for Special Dietary Use for Persons Intolerant to Gluten (CODEX STAN 118-1979)”. [Agenda 2]
 - The maximum value of protein, wording of footnotes 2, 3, 4 and 5, the minimum value of vitamin K and C, GUL of zinc, and the text of L (+) lactic acid producing culture, for the FUF standard for older infants (6-12 M) (Section A). [Agenda 5]
 - The principals of essential nutrient selection, framework of optional ingredient addition, energy density, the minimum value of protein, content values of essential nutrients (iron, vitamin C, A, B12, calcium, riboflavin, α -linolenic acid, linoleic acid), GUL of zinc, protein quality, not to use of partially hydrogenated oil, text of sodium, not to set the minimum value of available carbohydrates, the maximum value of protein and fat, for the FUF standard for young children (12-36M) (Section B). [Agenda 5]
- (3) Others on the handling of the agenda
 - To establish an In-Session WG to examine the analysis method for the Standard of Infant Formula (CODEX STAN 72-1981). [Agenda 2]
 - To postpone the discussion until the next session and to continue work at the eWG on NRV-R setting for older infants and young children. [Agenda 4c]
 - To re-establish the eWG to revise a draft standard, draft definition of biofortification, and timeline. [Agenda 6]
 - To re-establish the eWG to make recommendations for a draft NRV-NCD for

- EPA·DHA, and the change of timeline. [Agenda 7]
- To re-establish the eWG to continue to develop the proposed guideline of RUTF. [Agenda 8]
 - To request CCMAS to review the suitability or applicability of the three TFA measurement methods for “Free” claims of TFA. [Agenda 9]
 - To postpone the alignment work of food additives, and to establish an eWG to propose a framework to consider the technological justification of additives, to confirm the technological justification of Gellan gum, and to propose a method for handling xanthan gum and pectin. [Agenda 10]
 - To request CCMAS to reconsider the analysis methods for chromium, selenium and molybdenum for CODEX STAN 72-1981. [Agenda 11]