07 **DEVELOPMENT OF CONSUMER PRODUCT DESIGN TOOLS FOR CONSIDERING CHILD SAFETY**

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[1]Y Nishida, [2]T Asaka, [1,3]T Yamanaka. *[1]National Institute of Advanced Industrial Science and Technology, Japan; [2]Japan Industrial Designers' Association, Japan; [3]Ryokuen Children's Clinic, Japan*

Background Tools for supporting design of consumer products that is safe for children is strongly needed. Conventionally, toy companies and other child related consumer product manufacturers developed such tools by themselves. However medium and small companies whose main products are not for children have difficulty in developing such tools by themselves.

Purpose This study develops commonly usable tools for childsafe consumer products design even if main users of the products are not children.

Methods The authors developed some tools for supporting childsafe consumer product design using the measure data of 2228 children's aged 6 months old to 13-years-old by cooperating human engineering researchers with product designers. These data have been accumulated by Research Institute of Human Engineering for Quality Life (HQL) and National Institute of Advanced Industrial Science and Technology (AIST) since 2005 in Japan. The data includes over 50 kinds of body measurements.

Results The authors developed a data book on the measure of Japanese child (Fig. 1), a portable measure of child (Fig. 2), and portable absolute scale models of child (Fig. 3). For example, the

portable measure of child draws the thickness of the index finger of 1-year-old child as well as it can be used as an ordinary scale. At this moment, 1 to 6-year-old measures are available.

Significance This study developed commonly usable tools for child-safe consumer products design. The authors plan to disseminate the developed tools through seminar, publication, and lecture at colleges and professional schools.