1135-28-1060 **Dong Hyun Cho*** (j94385@kyonggi.ac.kr), Department of Mathematics, Kyonggi University, Suwon, Kyonggido 16227, South Korea. *A measurable function similar to the Itô integral on a generalized analogue of Wiener space.*

Let $C[0,T]$ denote a generalized analogue of Wiener space, that is, the space of continuous real-valued functions on the interval $[0,T]$. On the space $C[0,T]$, we introduce a finite measure $w_{\alpha,\beta;\varphi}$ with its properties, where φ is an arbitrary finite measure on the Borel class of $\mathbb{R}$. Using the measure $w_{\alpha,\beta;\varphi}$, we also introduce a measurable function on $C[0,T]$ which is similar to the Itô integral. We also establish the fact that if $\varphi(\mathbb{R}) = 1$, then $w_{\alpha,\beta;\varphi}$ is a probability measure with the mean function α and the variance function β, and the measurable function is reduced to the Paley-Wiener-Zygmund integral on the space $C[0,T]$. As an application of the integral, we derive a generalized Paley-Wiener-Zygmund theorem which is useful to calculate the integrals on $C[0,T]$. (Received September 19, 2017)