Spectra of some algebras of entire functions of bounded type, generated by the sequence of polynomials on a Banach space

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Let X be a complex Banach space. Let $\mathbb{P} = \{P_1, \ldots, P_n, \ldots\}$ be the sequence of polynomials such that P_n is an n-homogeneous continuous complex-valued polynomial on X for every positive integer n and the elements of $\mathbb{P}$ are algebraically independent. Let us denote $H_{\mathbb{P}}(X)$ the closed subalgebra, generated by the elements of $\mathbb{P}$, of the the Fréchet algebra $H_b(X)$ of all entire functions of bounded type on X. Note that every $f \in H_{\mathbb{P}}(X)$ can be uniquely represented in the form

$$f(x) = f(0) + \sum_{n=1}^{\infty} \sum_{k_1+2k_2+\ldots+nk_n=n} a_{k_1\ldots k_n} P_1^{k_1}(x) \cdots P_n^{k_n}(x).$$

Consequently, every continuous homomorphism $\varphi : H_{\mathbb{P}}(X) \to \mathbb{C}$ is uniquely determined by its values on the elements of $\mathbb{P}$. Therefore, the spectrum of $H_{\mathbb{P}}(X)$ can be identified with some set of sequences of complex numbers.
In this work we describe spectra of some algebras $H_{\mathbb{P}}(X)$.