The Bernstein-Sato polynomial of an ideal \( \mathfrak{a} \subseteq \mathbb{C}[x_1, \ldots, x_n] \) is an invariant that originated in complex analysis and with now strong applications in birational geometry and singularity theory over \( \mathbb{C} \). In this talk we present an analogue of this invariant in positive characteristic and discuss some of its basic properties. (Received February 03, 2020)