INTRODUCTION: *Xylella fastidiosa* is a Gram-negative bacterium, which is responsible for several diseases including Citrus Variegated chlorosis (CVC). The term "fastidious" is used for organisms that require a complex media to grow. This study reports the expression of proteins in XDM$_2$, XDM$_4$ and XDM$_5$ media and the growth curves. The *X. fastidiosa* genome sequencing generated valuable data by identifying genes acting. Based on these genes, strategies to have the gene expression studied were employed.

MATERIALS AND METHODS: The bacterium was cultured in different modified liquid medium and the growth was measured by absorbance of suspensions at $A_{600}$ during 2 to 6 days at 28 ºC. The extracellular proteins were obtained with precipitation with cold ethanol:acetone (1:1) and suspended in urea buffer overnight. The whole cell protein content was washed twice with PBS buffer containing 1 mM PMSF, then suspended in autoclaved water and lysed. The concentration of proteins was determined by Bradford method. The gels were stained with silver, and evaluated with Platinum 7 software. Subsequently, samples were subjected to isoelectric focusing by fractionation off-gel isoelectric focusing based on $pI$ to separate proteins cultivated in the three media, using pH range 3-10.

RESULTS AND DISCUSSION: According to the total protein profiles obtained by SDS-PAGE, bacterial cells cultivated in the XDM$_5$ showed high expression levels (31 bands) compared XDM$_2$ (22 bands) and XDM$_4$ (17 bands). Regarding the growth time, the most effective protein expression was observed after four days of incubation for *X. fastidiosa* grown in XDM$_5$ (15 bands) and XDM$_4$ (7 bands) instead of XDM$_2$, which showed a significant expression until 2 days of culture (11 bands) decreasing thereafter. Furthermore, the analyzed data showed that Offgel system provides a highly valuable tool to fractionate proteins from complex prokaryotes proteomes and proved to be an alternative to replace the two-dimensional electrophoresis.

Keywords: *Xylella fastidiosa*, XDM$_2$, XDM$_4$, XDM$_5$, proteins.

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