















Planning of remote experimental research on effects of greenhouse microclimate parameters on vegetable crop-producing. *International Journal on Smart Sensing and Intelligent Systems*, 10(4): 845-862. <https://doi.org/10.21307/ijssis-2018-021>

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## NOMENCLATURE

$EC$	electrical conductivity, $mS \cdot cm^{-1}$
$T$	solution temperature, $^{\circ}C$
$U_{out}$	sensor output voltage, V
$\overline{U_{out}_i}$	expected values of the meter output voltages, V
$U_{out_{i,j}}$	results of observations of the sensor output voltages in each of the series, V
$\overline{\overline{U_{out}}}$	the arithmetic mean of the expected output voltages of the meter, V
$D_{U_{out}_i}$	intra-group dispersions for each series, $V^2$
$D_{\overline{U_{out}}}$	dispersion of the expected values of the meter output voltage, $V^2$
$F_{ex}$	the value of the Fisher criterion of experimental data

$S_I$	independent estimates of the random distribution of observation results
$S_{II}$	
$F_p$	the critical value of the Fisher criterion
$P$	confidence coefficient
$EC_{real}(T_z)$	the actual value of electrical conductivity, $mS \cdot cm^{-1}$
$EC_{meas}(T_z)$	the value of electrical conductivity, obtained by measurements with further approximation, $mS \cdot cm^{-1}$
$a_0$	additive component of the approximation equation, $mS \cdot cm^{-1}$
$a_1$	multiplicative component of the approximation equation, $mS \cdot cm^{-1} \cdot V^{-1}$

## Greek symbols

$\sigma_U$	the total mean square deviation of the observation results of the meter output voltage, V
$\delta_{ECU}$	the relative basic random uncertainty of measurement of the meter output signal, %
$\delta_{ECU \max}$	the critical value of the main relative measurement uncertainty of electrical conductivity, %
$\delta_{ECT}$	the relative value of additional uncertainty of conductivity measurement in terms of destabilizing effects of temperature, %
$\delta_{EC}$	the total relative critical uncertainty, %

## Subscripts

$j$	the number of observations
$i$	the number of series
$N$	the number of observations in each series
$K$	the number of groups of observations obtained under the condition of traceability of measurements
$M$	the number of control points from the operating temperature range