

Pengaruh pretreatment air dingin, paradichlorobenzene (PDB), hydroxyquinoline (OQ), serta PDB:OQ (1:1) terhadap kromosom hibiscus rosa-sinensis l. = The pretreatment effect of cold water paradichlorobenzene (PDB), hydroxyquinoline (OQ) and combination of PDB:OQ (1:1) to the chromosome of hibiscus rosa sinensis l.

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Abstrak

Penelitian untuk mengetahui pengaruh jenis pretreatment terhadap kromosom Hibiscus rosa-sinensis telah dilakukan sejak Agustus 2016 hingga Mei 2017. Penelitian menggunakan dua faktor yaitu faktor pretreatment air dingin, paradichlorobenzene PDB, hydroxyquinoline OQ dan PDB:OQ 1:1 dengan variasi lama perendaman 3 jam, 6 jam, 12 jam dan 24 jam. Pengaruh masing-masing pretreatment terhadap fase pembelahan sel dari pucuk batang dapat dilihat melalui persentase interfase, profase awal, profase akhir, metafase, anafase, dan telofase.

Morfologi kromosom dan jumlah kromosom juga diamati. Jumlah profase awal dan profase akhir yang tinggi, serta jumlah interfase, metafase, anafase, dan telofase yang rendah digunakan untuk penentuan Pretreatment yang bekerja optimal.

Hasil penelitian menunjukkan pretreatment air dingin dengan lama perendaman 3 jam merupakan pretreatment terbaik untuk observasi kromosom. Morfologi kromosom Hibiscus rosa-sinensis L. yang diperoleh berukuran kecil, dengan jumlah kromosom banyak $2n=ca\ 28$ dan bersifat miksoptoidi.Study to know the effect of pretreatment to Hibiscus rosa sinensis L. chromosome has been carried on since August 2016 to May 2017. There was 2 factors that used, the pretreatment factors cold water, paradichlorobenzene PDB, hydroxyquinoline OQ, and PDB combined with OQ 1 1 and the soaking time length factors 3 hours, 6 hours, 12 hours and 24 hours. The influence of each pretreatment to the phase of cell division of shoot tip could be seen through the percentage of interphase, early prophase, late prophase, metaphase, anaphase, and telophase.

Chromosome morphology and chromosome number also could be observed. The high number of early and late prophase, as well as low number of interphase, metaphase, anaphase, and telophase, indicate that the pretreatment was optimum.

The results showed that pretreatment with cold water in 3 hours was optimum condition for chromosome observation. The chromosome of Hibiscus rosa sinensis L obtained in this study has small size with large amount in number $2n\ ca\ 28$ and mixoploid.