

# Faktor-faktor yang mempengaruhi kejadian gangguan penglihatan warna didapat pada pekerja pabrik sepatu bagian preparation dan assembly lasting = Factors that affect acquired colour vision impairment among preparation and assembly lasting division of shoe factory workers

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## Abstrak

Latar Belakang dan Tujuan Penelitian : Pemeriksaan kesehatan berkala tahun 2014, 2015, dan 2016 pada bagian preparation dan assembly lasting suatu pabrik sepatu menunjukkan kejadian gangguan penglihatan warna didapat. Penelusuran dilakukan untuk menemukan penyebab gangguan penglihatan warna didapat dengan kecurigaan diarahkan pada penggunaan pelarut organik, kebiasaan pemakaian alat pelindung diri, dan intensitas cahaya.

Metode : Penelitian ini menggunakan desain kasus kontrol untuk 74 kasus dan 222 kontrol. Pemeriksaan Farnsworth D15 dilakukan sebagai standar diagnosis gangguan penglihatan warna didapat. Selanjutnya, dari pemeriksaan Farnsworth D15 akan didapatkan skor Colour Confusion Index CCI dan penentuan gangguan penglihatan warna secara kualitatif dilakukan melalui aplikasi [www.torok.info](http://www.torok.info). Pemeriksaan lingkungan yang dilakukan meliputi pengukuran intensitas cahaya, jarak antara lampu dengan pekerja, dan kadar pelarut organik yang terhirup yaitu Metil Etil Keton dan Benzene-Toluen-EtilBenzene-Xylene. Kuesioner disebar untuk mengetahui riwayat kerja, kesehatan, dan kebiasaan pemakaian alat pelindung diri.

Hasil : 74 pekerja dari total 345 pekerja pada sub bagian preparation dan assembly lasting dinyatakan menderita gangguan penglihatan warna didapat. Kadar pelarut organik terhirup dan jarak lampu terbukti tidak memiliki hubungan bermakna dengan gangguan penglihatan warna didapat. Pemakaian masker selama bekerja, intensitas cahaya, dan masa kerja terbukti memiliki hubungan bermakna dengan gangguan penglihatan warna didapat.

Kesimpulan : Prevalensi gangguan penglihatan warna didapat di bagian preparation dan assembly lasting pabrik sepatu ini adalah 21,44. Pemakaian masker selama bekerja merupakan faktor yang paling berpengaruh menyebabkan gangguan penglihatan warna didapat dengan OR 2,966 IK 95 = 1,409 ndash; 6,245 .

*Background and Objective* : Medical Check Up in 2014, 2015, and 2016 among shoe factory workers in preparation and assembly lasting division has shown acquired colour vision impairment cases. Identification is held to find the causes with several suspicion such as organic solvent, application of personal protective equipment, and intensity of light.

*Methods* : This study used a case control design for 74 cases and 222 control. Workers are tested by Farnsworth D15 as a golden standard to diagnose acquired colour vision impairment, then colour confusion index CCI score will be determined based from farnsworth D15 test and qualitative methods to distinguish acquired colour vision impairment is set by [www.torok.info](http://www.torok.info) application. Enviromental measurement include light intensity measurement, the distance between light and worker, and the amount of organic solvent inhaled divided into Metil Ethyl Ketone measurement and Benzene Toluene EthylBenzene Xylene measurement. Quesioner is spread to get the information about history of work, health, and application of

personal protective equipment.

Results : 74 workers has acquired colour vision impairment among 345 workers that has been checked. The amount of organic solvent inhaled and the distance between light and worker do not show a significant association with acquired colour vision impairment. The application of safety mask, light intensity, and length of work show significant association with acquired colour vision impairment.

Conclusions : Prevalence of acquired colour vision impairment in preparation and assembly lasting division of this shoe factory workers is 21,44 . Application of safety mask is the main factor that cause acquired colour vision impairment with OR 2,966 IK 95 1,409 ndash 6,245.</i>