Sintesis ligan para di 2 1 methyl 3 pyridyl 4 5 dihydro 1h pyrazol 5 yl benzena sebagai sensor ion logam pb 2 = Synthesis of para di 2 1 methyl 3 pyridyl 4 5 dihydro 1h pyrazol 5 yl benzene ligand as sensor for pb 2 metal ions / Tirta Angen Pangestu

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Abstrak

[1igan para-di-%-+!-rnethyl-(-pyridyl-*,3-dihydro-!:-pyra<ol-3-yl/ben<ena sudah berhasil disintesis rnelalui rnetode kondensasi Aldol. :asil yang diperoleh dikarakterisasi rnenggunakan spektro2otorneter .>->is, spektro2otorneter in2rarnerah dan spektrorneter NM?. Aplikasi ligan ini adalah sebagai Sensor ion logarn Pb%= dan dilakukan rnenggunakan spektrorneter .>->is. :asil dari studi sensor rnenunjukkan bahwa ligan rnernpunyai intensitas absorbansi yang kuat. :al ini didukung oleh nilai absorpti$itas rnolar +@/ yang besar. Studi spektroskopi .>->is pada penarnbahan ion Pb%= rnenunjukkan rnunculnya puncak baru pada daerah panjang gelornbang %A7 nrn. :al ini rnenunjukkan adanya pernbentukan kornpleks antara ion logarn +Pb%=/ dengan ligan para-di-%-+!-rnethyl-(-pyridyl-*,3-dihydro-!:-pyra<ol-3-yl/ben<ena. Studi aplikasi sensor rnenunjukkan bahwa ligan ini dapat dijadikan sensor untuk ion Pb%= karena penarnbahan ion ini rnenyebabkan penurunan intensitas serapan absorbansi. :asil studi e2ekti$itas sensor rnenunjukkan bahwa ligan para-di-%-+!-rnethyl-(-pyridyl-*,3-dihydro-!:-pyra<ol-3-yl/ben<ena rnerupakan sensor yang e2ekti2 terhadap penarnbahan ion Pb%= pada panjang gelornbang rnaksirnurn +Brnaks/ %A! nrn.􀀓􀀑􀀐􀀃􀀄􀀍􀀈􀀂 􀀆􀀈􀀍􀀈􀀌􀀒􀀑􀀍􀀈􀀍 􀀅􀀑􀀂􀀄􀀂􀀇􀀈 􀀅􀀑􀀒􀀛􀀆􀀑 􀀏􀀛􀀌􀀆􀀑􀀌􀀍􀀄􀀍􀀈 􀀁􀀂􀀆􀀛􀀂􀀙 􀀺􀀄􀀍􀀈􀀂 􀀎􀀄􀀌􀀖 􀀆􀀈􀀊􀀑􀀐􀀛􀀂􀀑􀀃 􀀆􀀈􀀏􀀄􀀐􀀄􀀏􀀒􀀑􀀐􀀈􀀍􀀄􀀍􀀈 􀀅􀀑􀀌􀀖􀀖􀀇􀀌􀀄􀀏􀀄􀀌 􀀍􀀊􀀑􀀏􀀒􀀐􀀛􀀲􀀛􀀒􀀛􀀅􀀑􀀒􀀑􀀐 􀀮􀀾􀀗􀀾􀀈􀀍􀀉

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rnethyl-(-pyridyl-*,3-dihydro-!:-pyra<ol-3-yl/ben<ene
has been synthesi<ed well by using Aldol condensation rnethod. 5he result o2
synthesi<ing is characteri<ed by .>->isible spectrophotorneter,)n2rared
spectrophotorneter and NM? spectrorneter. 5he application o2 this ligand as
sensor 2or Pb%= rnetal ions was studied by using .>->isible spectrophotorneter.
Sensing studies indicate that the ligand has a strong absorbans intensity. 5his is
supported by a large rnolar absorpti$ity +@/ $alue. .>->is spectroscopy studies on
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wa$elength region. 5his indicates that the cornpleCes 2orrned between rnetal ions
+Pb%=/ with para-di-%-+!-rnethyl-(-pyridyl-*,3-dihydro-!:-pyra<ol-3-yl/ben<ene
ligand. Application sensor studies showed that these ligands can be used as sensor
2or Pb%= ions due to the addition o2 these ions causes a Duenched in absorbans
intensity. 5he results o2 the study o2 sensor e2ecti$ity showed that the ligand paradi-%-+!-
rnethyl-(-pyridyl-*,3-dihydro-!:-pyra<ol-3-yl/ben<ene is sensor e2ecti$e
addition o2 Pb%= ions at the rnaCirnurn wa$elength +BrnaC/ %A! nrn.]