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Evaluation of New Multifocal IOL With Lower Near Addition (off label in the USA)

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Alcon^{1,2,3}

Allergan^{1,4}

AMO^{1,2,3,4}

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Geuder²

Novartis^{1,2}

Oculentis^{1,2,3}

Ophtec²

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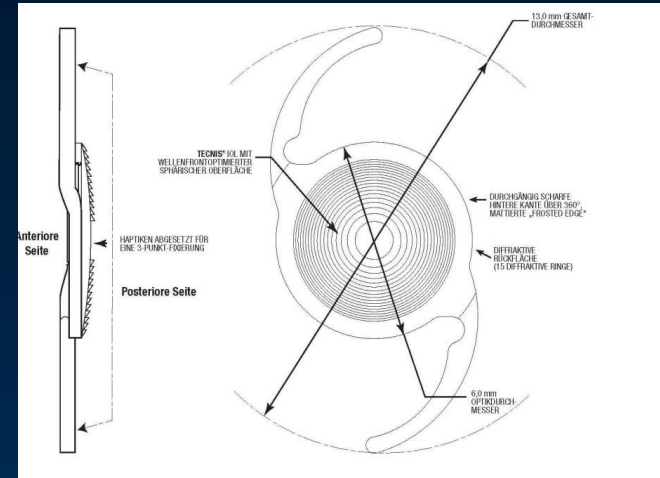
Rayner^{1,2,3}



1 = Research grant; 2 = Travel grant; 3 = Lecture honorarium; 4 = Consulting

Purpose

Evaluation of two MIOs with a different near addition (ZKB00 add +2.75 & ZLB00 add +3.25, AMO, USA)



	ZKB00	ZLB00
Optic design	Biconvex, aspheric anterior surface, diffractive posterior surface	
Edge design	360° square edge design, „frosted edge“	
Material	Hydrophobic acrylat	
Add power	+2,75 D	+2,75 D
Optic diameter	6 mm	
Overall diamtere	13 mm	



Tecnis ZKB00 – Case 1

Female patient, 58 years old,

Diagnosis:

Cataracta supcapsularis posterior

Findings:

Pre OD: CDVA 0.3 logMAR

Pre OS: CDVA 0.3 logMAR



Binocular cataract surgery with
implantation of a MIOL

Tecnis (AMO) ZKB00

In august 2013



Tecnis ZKB00 – Case 1

3 month postoperative

OD

Distance:

- UDVA -0.06 logMAR
- refraction -0.25 sph
- CDVA -0.1 logMAR

Near (40 cm):

- UNVA 0.18 logMAR
- DCNVA 0.06 logMAR
- CNVA 0.06 logMAR

OS

Distance:

- UDVA -0.04 logMAR
- refraction +0.25/-0.75/56°
- CDVA -0.06 logMAR

Near (40 cm):

- UNVA 0.06 logMAR
- DCNVA 0.06 logMAR
- CNVA 0.06 logMAR



Tecnis ZKB00 – Case 1

3 month postoperative

Salzburg Reading Desk

Distance corrected subjective near visual acuity

	OD	OS	BIN
VA [logMAR]	0.09	0.26	0.1
Distance [cm]	52.5	54.5	50.8
Words/Minute	83	89	120
Time [Sec]	11.6	11.5	8.5

Distance corrected subjective near visual acuity

	OD	OS	BIN
VA [logMAR]	0.20	0.19	0.15
Distance [cm]	78.3	80.1	79.2
Words/Minute	73	74	74
Time [Sec]	14.6	15.1	19.2



Salzburg Reading Desk (SPD Vision)



ZLB00 – Case 2

Male patient, 64years

Diagnosis:

Cataract, monocular double vision

Findings:

- Pre-Op OD: $-3,00/-1,00/144^\circ$ → 0,8 logMAR
- Pre-Op OS: $+0,25/-1,50/90^\circ$ → 0,2 logMAR



Binocular cataract surgery with
implantation of a MIOL
Tecnis (AMO) ZLB00
in sep/oct 2013



ZLB00 – Case 2

3 month postoperative

OD

Distance:

- UDVA 0.14 logMAR
- refraction +1.25/-0.75/97°
- CDVA -0.06 logMAR

Near (40 cm):

- UNVA 0.14 logMAR
- DCNVA 0.04 logMAR
- CNVA 0.04 logMAR

OS

Distance:

- UDVA 0.14 logMAR
- Refraktion +1.00/-1.50/86°
- CDVA -0.08 logMAR

Near (40 cm):

- UNVA 0.24 logMAR
- DCNVA 0.04 logMAR
- CNVA 0.04 logMAR



ZLB00 – Case 2

3 month postoperative

Salzburg Reading Desk

Distance corrected subjective near visual acuity

	OD	OS	BIN
VA [logMAR]	0.09	0.18	0.09
Distance [cm]	40.8	39.8	40.9
Words/Minute	112	112	115
Time [Sec]	8.0	8.1	7.9

Distance corrected subjective intermediate visual acuity

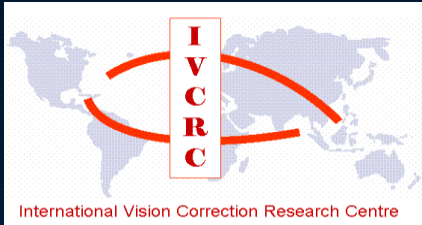
	OD	OS	BIN
VA [logMAR]	0.29	0.18	0.10
Distance [cm]	82.6	79.3	80.0
Words/Minute	58	62	67
Time [Sec]	15.5	14.5	15.3



Salzburg Reading Desk (SPD Vision)

Tecnis low add – Conclusion

- The new low add Design with a near add of +2.75 or +3.25 offers good functional results in distance and near
- Patient satisfaction is very high
- With the optimized A-constants the prediction of residual refractive error is very exact
- Evaluation of near and intermediate distance visual acuity seems far more precisely with the Salburg Reading desk than with regular ETDRS charts especially as the individual distances can be measured



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