

Classification Matrix & Sensitivity Analysis for Validating Licensing Key indicator Systems (Fiene, 2017)

	1	2	3	5	7	8	10	Comments
A	1	1	1	0	0	1	1	Perfect
B	.52	.52	.52	.48	.48	.52	.04	Random
C	.71	.96	.94	.04	.29	.84	.70	False (-)
D	.94	.78	.71	.22	.06	.81	.70	False (+)
E	---	0	0	1	---	0	---	False +100%
F	0	0	0	1	1	0	-1	False+-100
H	.45	.46	.40	.54	.55	.46	-.08	Random

Measures:

- 1 = Sensitivity $TPR = TP / (TP + FN)$
- 2 = Specificity $SPC = TN / (FP + TN)$
- 3 = Precision $PPV = TP / (TP + FP)$
- 5 = False Positive $FPR = FP / (FP + TN)$
- 7 = False Negative $FNR = FN / (FN + TP)$
- 8 = Accuracy $ACC = (TP + TN) / (P + N)$
- 10 = Correlation $((TP)(TN)) - ((FP)(FN)) / \text{SQRT}((TP + FP)(TP + FN)(TN + FP)(TN + FN))$

- PP = Predicted Positive = CI+
- PN = Predicted Negative = CI-
- TP = True Positive = KI+
- TN = True Negative = KI-

	TRUE POSITIVE (TP)(KI+)	TRUE NEGATIVE (TN)(KI-)
PREDICTED POSITIVE (PP)(CI+)	++	+-
PREDICTED NEGATIVE (PN)(CI-)	-+	--

CI+/CI-/KI+/KI-

- A = 25/0/0/25 – Perfect match between CI and KI.
- B = 13/12/12/13 – Random matching between CI and KI.
- C = 17/7/1/25 – KI+ x CI- (False-)
- D = 17/1/7/25 – KI- x CI+ (False+)
- E = 0/0/50/0 – KI- x CI+ unlikely
- F = 0/25/25/0 - False + & - 100% unlikely
- H = 20/24/30/26 – Random matching between CI and KI.