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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Method | DE | EBLSHADE | ADELI | NDE | MABC | TLBO | GOTLBO | STLBO | PSO | IJAYA | ISCA | NNA | CWOA | WW |
| DE | = |  |  |  | FA |  | Fr, FA |  | Fr, FA |  | Fr, FA | Fr, FA | Fr, FA |  |
| EBLSHADE | Fr, FA | = |  |  | + |  | + |  | + | Fr, FA | + | + | + | + |
| ADELI | + | Fr | = | Fr, FA (Finner) | + |  | + |  | + | + | + | + | + | + |
| NDE | Fr,FA |  |  | = | Fr,FA,Q(Finner) |  | + |  | + | Fr, FA | + | + | + | + |
| MABC |  |  |  |  | = |  | FA |  | Fr, FA |  | Fr, FA | Fr, FA | Fr, FA | Fr, FA |
| TLBO | + | Fr (Finner) |  | Fr,FA (Finner) | + | = | + |  | + | Fr,FA,Q(Finner) | + | + | + | + |
| GOTLBO |  |  |  |  |  |  | = |  | Fr, FA |  | Fr (Finner), FA | Fr, FA | Fr, FA | FA |
| STLBO | + | Fr(Finner), FA |  | Fr, FA | + |  | + | = | + | Fr,FA,Q(Finner) | + | + | + | + |
| PSO |  |  |  |  |  |  |  |  | = |  |  |  |  |  |
| IJAYA | FA (Finner) |  |  |  | Fr, FA |  | Fr, FA |  | + | = | Fr, FA | Fr,FA,Q(Finner) | Fr,FA,Q(Finner) | Fr, FA |
| ISCA |  |  |  |  |  |  |  |  | FA |  | = |  |  |  |
| NNA |  |  |  |  |  |  |  |  | FA |  | FA | = | FA |  |
| CWOA |  |  |  |  |  |  |  |  | FA |  |  |  | = |  |
| WW |  |  |  |  |  |  |  |  | FA |  | FA |  | FA | = |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| Method |  |
| DE | MABC (FA) ; GOTLBO (Fr, FA) ; PSO (Fr, FA); ISCA (Fr, FA) ; NNA (Fr, FA) ; CWOA (Fr, FA) |
| EBLSHADE | DE (Fr, FA) ; MABC ; GOTLBO ; PSO ; IJAYA (Fr, FA) ; ISCA ; NNA ; CWOA ; WW |
| ADELI | DE ; EBLSHADE (Fr) ; NDE (Fr, FA (Finner)) ; MABC ; GOTLBO ; PSO ; IJAYA ; ISCA ; NNA ; CWOA ; WW |
| NDE | DE (Fr, FA) ; MABC (Fr,FA,Q(Finner) ) ; GOTLBO ; PSO ; IJAYA (Fr, FA) ; ISCA ; NNA ; CWOA ; WW |
| MABC | GOTLBO (FA) ; PSO (Fr, FA) ; ISCA(Fr, FA) ; NNA(Fr, FA) ; CWOA(Fr, FA) ; WW(Fr, FA) |
| TLBO | DE ; EBLSHADE (Fr (Finner)) ; NDE (Fr,FA (Finner)) ; MABC ; GOTLBO ; PSO ; IJAYA (Fr,FA,Q(Finner) ) ; ISCA ; NNA ; CWOA ; WW |
| GOTLBO | PSO (Fr, FA) ; ISCA (Fr (Finner), FA) ; NNA (Fr, FA) ; CWOA (Fr, FA) ; WW (FA) |
| STLBO | DE ; EBLSHADE (Fr(Finner), FA) ; NDE (Fr, FA) ; MABC ; GOTLBO ; PSO ; IJAYA (Fr,FA,Q(Finner)) ; ISCA ; NNA ; CWOA ; WW |
| PSO |  |
| IJAYA | DE (FA (Finner) ) ; MABC (Fr, FA) ; GOTLBO (Fr, FA) ; PSO ; ISCA (Fr, FA) ; NNA (Fr,FA,Q(Finner) ); CWOA (Fr,FA,Q(Finner)) ; WW (Fr, FA) |
| ISCA | PSO (FA) |
| NNA | PSO (FA) ; ISCA (FA) ; CWOA (FA) ; WW (FA) |
| CWOA | PSO (FA) |
| WW | PSO (FA) ; ISCA (FA) ; CWOA (FA) |
|  |  |

DE ; EBLSHADE ; ADELI ; NDE ; MABC ; TLBO ; GOTLBO ; STLBO ; PSO ; IJAYA ; ISCA ; NNA ; CWOA ; WW ; ;