# Two Treatments

## Four-plex system

4 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Aa* | *Bb* | *Ca* | *Db* |
| 2 | *Bb* | *Aa* | *Db* | *Ca* |

8 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Ea* | *Db* | *Bb* | *Ca* |
| 2 | *Db* | *Ea* | *Ca* | *Bb* |
| 3 | *Hb* | *Ga* | *Fb* | *Aa* |
| 4 | *Ga* | *Hb* | *Aa* | *Fb* |

10 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Hb* | *Fb* | *Ga* | *Ea* |
| 2 | *Fb* | *Hb* | *Ea* | *Ga* |
| 3 | *Bb* | *Aa* | *Ca* | *Db* |
| 4 | *Aa* | *Bb* | *Db* | *Ca* |
| 5 | *Ia* | *Ia* | *Jb* | *Jb* |

12 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Aa* | *Bb* | *Ca* | *Db* |
| 2 | *Bb* | *Aa* | *Db* | *Ca* |
| 3 | *Ea* | *Fb* | *Ga* | *Hb* |
| 4 | *Fb* | *Ea* | *Hb* | *Ga* |
| 5 | *Ia* | *Jb* | *Ka* | *Lb* |
| 6 | *Jb* | *Ia* | *Lb* | *Ka* |

14 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Jb* | *Ga* | *Ia* | *Db* |
| 2 | *Ga* | *Jb* | *Db* | *Ia* |
| 3 | *Bb* | *Ea* | *Lb* | *Aa* |
| 4 | *Ea* | *Bb* | *Aa* | *Lb* |
| 5 | *Fb* | *Ca* | *Nb* | *Ka* |
| 6 | *Ca* | *Fb* | *Ka* | *Nb* |
| 7 | *Hb* | *Hb* | *Ma* | *Ma* |

16 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Bb* | *Aa* | *Lb* | *Ka* |
| 2 | *Aa* | *Bb* | *Ka* | *Lb* |
| 3 | *Ma* | *Hb* | *Fb* | *Ca* |
| 4 | *Hb* | *Ma* | *Ca* | *Fb* |
| 5 | *Ia* | *Ga* | *Pb* | *Nb* |
| 6 | *Ga* | *Ia* | *Nb* | *Pb* |
| 7 | *Jb* | *Db* | *Oa* | *Ea* |
| 8 | *Db* | *Jb* | *Ea* | *Oa* |

Eight-plex system

8 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Aa* | *Bb* | *Ca* | *Db* | *Ea* | *Fb* | *Ga* | *Hb* |
| 2 | *Bb* | *Aa* | *Db* | *Ca* | *Fb* | *Ea* | *Hb* | *Ga* |

12 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Ca* | *Ia* | *Fb* | *Hb* | *Jb* | *Aa* | *Ea* | *Bb* |
| 2 | *Ia* | *Ca* | *Hb* | *Fb* | *Aa* | *Jb* | *Bb* | *Ea* |
| 3 | *Db* | *Db* | *Ga* | *Ga* | *Ka* | *Ka* | *Lb* | *Lb* |

16 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Ga* | *Ia* | *Jb* | *Aa* | *Ka* | *Bb* | *Pb* | *Fb* |
| 2 | *Ia* | *Ga* | *Aa* | *Jb* | *Bb* | *Ka* | *Fb* | *Pb* |
| 3 | *Nb* | *Db* | *Lb* | *Ca* | *Ma* | *Hb* | *Ea* | *Oa* |
| 4 | *Db* | *Nb* | *Ca* | *Lb* | *Hb* | *Ma* | *Oa* | *Ea* |

Three Treatments

## Four-plex system

6 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Bb* | *Da* | *Aa* | *Cc* |
| 2 | *Da* | *Bb* | *Cc* | *Aa* |
| 3 | *Fc* | *Fc* | *Eb* | *Eb* |

12 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Da* | *Eb* | *Kb* | *Lc* |
| 2 | *Eb* | *Da* | *Lc* | *Kb* |
| 3 | *Hb* | *Ja* | *Ga* | *Ic* |
| 4 | *Ja* | *Hb* | *Ic* | *Ga* |
| 5 | *Fc* | *Cc* | *Aa* | *Bb* |
| 6 | *Cc* | *Fc* | *Bb* | *Aa* |

18 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Ja* | *Ga* | *Hb* | *Lc* |
| 2 | *Ga* | *Ja* | *Lc* | *Hb* |
| 3 | *Kb* | *Ic* | *Da* | *Cc* |
| 4 | *Ic* | *Kb* | *Cc* | *Da* |
| 5 | *Eb* | *Aa* | *Bb* | *Fc* |
| 6 | *Aa* | *Eb* | *Fc* | *Bb* |
| 7 | *Nb* | *Oc* | *Pa* | *Ma* |
| 8 | *Oc* | *Nb* | *Ma* | *Pa* |
| 9 | *Rc* | *Rc* | *Qb* | *Qb* |

24 Phase 1 experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Ga* | *Nb* | *Fc* | *Ja* |
| 2 | *Nb* | *Ga* | *Ja* | *Fc* |
| 3 | *Lc* | *Da* | *Ic* | *Qb* |
| 4 | *Da* | *Lc* | *Qb* | *Ic* |
| 5 | *Ma* | *Hb* | *Aa* | *Oc* |
| 6 | *Hb* | *Ma* | *Oc* | *Aa* |
| 7 | *Xc* | *Rc* | *Sa* | *Wb* |
| 8 | *Rc* | *Xc* | *Wb* | *Sa* |
| 9 | *Kb* | *Bb* | *Va* | *Uc* |
| 10 | *Bb* | *Kb* | *Uc* | *Va* |
| 11 | *Cc* | *Pa* | *Eb* | *Tb* |
| 12 | *Pa* | *Cc* | *Tb* | *Eb* |

## Eight-plex system

12 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Cc* | *Bb* | *Ja* | *Eb* | *Lc* | *Kb* | *Aa* | *Fc* |
| 2 | *Bb* | *Cc* | *Eb* | *Ja* | *Kb* | *Lc* | *Fc* | *Aa* |
| 3 | *Ga* | *Ga* | *Ic* | *Ic* | *Da* | *Da* | *Hb* | *Hb* |

18 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Va* | *Rc* | *Kb* | *Fc* | *Hb* | *Aa* | *Ga* | *Nb* |
| 2 | *Rc* | *Va* | *Fc* | *Kb* | *Aa* | *Hb* | *Nb* | *Ga* |
| 3 | *Pa* | *Bb* | *Eb* | *Da* | *Oc* | *Wb* | *Xc* | *Cc* |
| 4 | *Bb* | *Pa* | *Da* | *Eb* | *Wb* | *Oc* | *Cc* | *Xc* |
| 5 | *Tb* | *Uc* | *Ic* | *Ja* | *Sa* | *Lc* | *Qb* | *Ma* |
| 6 | *Uc* | *Tb* | *Ja* | *Ic* | *Lc* | *Sa* | *Ma* | *Qb* |

Four Treatments

## Four-plex system

8 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Ea* | *Bb* | *Cc* | *Dd* |
| 2 | *Bb* | *Ea* | *Dd* | *Cc* |
| 3 | *Gc* | *Hd* | *Aa* | *Fb* |
| 4 | *Hd* | *Gc* | *Fb* | *Aa* |

12 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Bb* | *Kc* | *Ia* | *Hd* |
| 2 | *Kc* | *Bb* | *Hd* | *Ia* |
| 3 | *Dd* | *Aa* | *Cc* | *Fb* |
| 4 | *Aa* | *Dd* | *Fb* | *Cc* |
| 5 | *Ea* | *Jb* | *Ld* | *Gc* |
| 6 | *Jb* | *Ea* | *Gc* | *Ld* |

16 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Dd* | *Aa* | *Bb* | *Cc* |
| 2 | *Aa* | *Dd* | *Cc* | *Bb* |
| 3 | *Gc* | *Fb* | *Hd* | *Ea* |
| 4 | *Fb* | *Gc* | *Ea* | *Hd* |
| 5 | *Kc* | *Jb* | *Ld* | *Ia* |
| 6 | *Jb* | *Kc* | *Ia* | *Ld* |
| 7 | *Ma* | *Pd* | *Oc* | *Nb* |
| 8 | *Pd* | *Ma* | *Nb* | *Oc* |

20 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Kc* | *Rb* | *Aa* | *Ld* |
| 2 | *Rb* | *Kc* | *Ld* | *Aa* |
| 3 | *Jb* | *Td* | *Oc* | *Ea* |
| 4 | *Td* | *Jb* | *Ea* | *Oc* |
| 5 | *Hd* | *Gc* | *Fb* | *Ia* |
| 6 | *Gc* | *Hd* | *Ia* | *Fb* |
| 7 | *Qa* | *Pd* | *Sc* | *Bb* |
| 8 | *Pd* | *Qa* | *Bb* | *Sc* |
| 9 | *Ma* | *Nb* | *Cc* | *Dd* |
| 10 | *Nb* | *Ma* | *Dd* | *Cc* |

24 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Cc* | *Bb* | *Aa* | *Dd* |
| 2 | *Bb* | *Cc* | *Dd* | *Aa* |
| 3 | *Hd* | *Ea* | *Fb* | *Gc* |
| 4 | *Ea* | *Hd* | *Gc* | *Fb* |
| 5 | *Jb* | *Kc* | *Ld* | *Ia* |
| 6 | *Kc* | *Jb* | *Ia* | *Ld* |
| 7 | *Ma* | *Pd* | *Oc* | *Nb* |
| 8 | *Pd* | *Ma* | *Nb* | *Oc* |
| 9 | *Sc* | *Qa* | *Td* | *Rb* |
| 10 | *Qa* | *Sc* | *Rb* | *Td* |
| 11 | *Vb* | *Xd* | *Ua* | *Wc* |
| 12 | *Xd* | *Vb* | *Wc* | *Ua* |

28 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *AIa* | *ALd* | *AOc* | *ARb* |
| 2 | *ALd* | *AIa* | *ARb* | *AOc* |
| 3 | *AHd* | *BAc* | *AEa* | *AZb* |
| 4 | *BAc* | *AHd* | *AZb* | *AEa* |
| 5 | *AGc* | *ATd* | *ANb* | *AYa* |
| 6 | *ATd* | *AGc* | *AYa* | *ANb* |
| 7 | *ACc* | *AVb* | *AUa* | *AXd* |
| 8 | *AVb* | *ACc* | *AXd* | *AUa* |
| 9 | *AJb* | *ADd* | *ASc* | *AAa* |
| 10 | *ADd* | *AJb* | *AAa* | *ASc* |
| 11 | *AQa* | *ABb* | *APd* | *AWc* |
| 12 | *ABb* | *AQa* | *AWc* | *APd* |
| 13 | *AKc* | *AMa* | *AFb* | *BBd* |
| 14 | *AMa* | *AKc* | *BBd* | *AFb* |

32 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *ACc* | *ADd* | *AAa* | *ABb* |
| 2 | *ADd* | *ACc* | *ABb* | *AAa* |
| 3 | *AGc* | *AEa* | *AHd* | *AFb* |
| 4 | *AEa* | *AGc* | *AFb* | *AHd* |
| 5 | *ALd* | *AJb* | *AKc* | *AIa* |
| 6 | *AJb* | *ALd* | *AIa* | *AKc* |
| 7 | *APd* | *AMa* | *AOc* | *ANb* |
| 8 | *AMa* | *APd* | *ANb* | *AOc* |
| 9 | *AQa* | *ASc* | *ARb* | *ATd* |
| 10 | *ASc* | *AQa* | *ATd* | *ARb* |
| 11 | *AVb* | *AUa* | *AWc* | *AXd* |
| 12 | *AUa* | *AVb* | *AXd* | *AWc* |
| 13 | *BBd* | *AZb* | *BAc* | *AYa* |
| 14 | *AZb* | *BBd* | *AYa* | *BAc* |
| 15 | *BDb* | *BEc* | *BCa* | *BFd* |
| 16 | *BEc* | *BDb* | *BFd* | *BCa* |

## Eight-plex system

8 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Aa* | *Gc* | *Cc* | *Fb* | *Hd* | *Bb* | *Ea* | *Dd* |
| 2 | *Gc* | *Aa* | *Fb* | *Cc* | *Bb* | *Hd* | *Dd* | *Ea* |

12 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Bb* | *Ld* | *Ea* | *Jb* | *Aa* | *Cc* | *Hd* | *Kc* |
| 2 | *Ld* | *Bb* | *Jb* | *Ea* | *Cc* | *Aa* | *Kc* | *Hd* |
| 3 | *Gc* | *Gc* | *Dd* | *Dd* | *Fb* | *Fb* | *Ia* | *Ia* |

16 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Kc* | *Ld* | *Jb* | *Dd* | *Fb* | *Ea* | *Gc* | *Ma* |
| 2 | *Ld* | *Kc* | *Dd* | *Jb* | *Ea* | *Fb* | *Ma* | *Gc* |
| 3 | *Aa* | *Bb* | *Cc* | *Ia* | *Oc* | *Pd* | *Nb* | *Hd* |
| 4 | *Bb* | *Aa* | *Ia* | *Cc* | *Pd* | *Oc* | *Hd* | *Nb* |

20 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Cc* | *Qa* | *Ia* | *Fb* | *Sc* | *Td* | *Rb* | *Ld* |
| 2 | *Qa* | *Cc* | *Fb* | *Ia* | *Td* | *Sc* | *Ld* | *Rb* |
| 3 | *Dd* | *Jb* | *Kc* | *Ma* | *Bb* | *Aa* | *Pd* | *Gc* |
| 4 | *Jb* | *Dd* | *Ma* | *Kc* | *Aa* | *Bb* | *Gc* | *Pd* |
| 5 | *Oc* | *Oc* | *Hd* | *Hd* | *Nb* | *Nb* | *Ea* | *Ea* |

24 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Qa* | *Sc* | *Rb* | *Ld* | *Vb* | *Kc* | *Ma* | *Pd* |
| 2 | *Sc* | *Qa* | *Ld* | *Rb* | *Kc* | *Vb* | *Pd* | *Ma* |
| 3 | *Hd* | *Ua* | *Wc* | *Dd* | *Cc* | *Nb* | *Jb* | *Aa* |
| 4 | *Ua* | *Hd* | *Dd* | *Wc* | *Nb* | *Cc* | *Aa* | *Jb* |
| 5 | *Bb* | *Fb* | *Oc* | *Ea* | *Td* | *Ia* | *Xd* | *Gc* |
| 6 | *Fb* | *Bb* | *Ea* | *Oc* | *Ia* | *Td* | *Gc* | *Xd* |

28 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *AHd* | *AVb* | *AZb* | *AGc* | *APd* | *AWc* | *AYa* | *AEa* |
| 2 | *AVb* | *AHd* | *AGc* | *AZb* | *AWc* | *APd* | *AEa* | *AYa* |
| 3 | *AJb* | *AUa* | *BAc* | *AIa* | *AFb* | *ADd* | *ASc* | *AXd* |
| 4 | *AUa* | *AJb* | *AIa* | *BAc* | *ADd* | *AFb* | *AXd* | *ASc* |
| 5 | *ALd* | *AAa* | *ARb* | *BBd* | *AKc* | *AMa* | *ABb* | *AOc* |
| 6 | *AAa* | *ALd* | *BBd* | *ARb* | *AMa* | *AKc* | *AOc* | *ABb* |
| 7 | *ACc* | *ACc* | *AQa* | *AQa* | *ANb* | *ANb* | *ATd* | *ATd* |

32 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *AAa* | *ABb* | *ACc* | *ADd* | *AEa* | *AFb* | *AGc* | *AHd* |
| 2 | *ABb* | *AAa* | *ADd* | *ACc* | *AFb* | *AEa* | *AHd* | *AGc* |
| 3 | *AIa* | *AJb* | *AKc* | *ALd* | *AMa* | *ANb* | *AOc* | *APd* |
| 4 | *AJb* | *AIa* | *ALd* | *AKc* | *ANb* | *AMa* | *APd* | *AOc* |
| 5 | *ASc* | *ATd* | *AQa* | *ARb* | *AWc* | *AXd* | *AUa* | *AVb* |
| 6 | *ATd* | *ASc* | *ARb* | *AQa* | *AXd* | *AWc* | *AVb* | *AUa* |
| 7 | *BAc* | *BBd* | *AYa* | *AZb* | *BEc* | *BFd* | *BCa* | *BDb* |
| 8 | *BBd* | *BAc* | *AZb* | *AYa* | *BFd* | *BEc* | *BDb* | *BCa* |

Five Treatments

## Four-plex system

10 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Gb* | *Cc* | *Aa* | *Dd* |
| 2 | *Cc* | *Gb* | *Dd* | *Aa* |
| 3 | *Je* | *Fa* | *Bb* | *Hc* |
| 4 | *Fa* | *Je* | *Hc* | *Bb* |
| 5 | *Id* | *Id* | *Ee* | *Ee* |

20 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Te* | *Rc* | *Dd* | *Bb* |
| 2 | *Rc* | *Te* | *Bb* | *Dd* |
| 3 | *Gb* | *Sd* | *Mc* | *Fa* |
| 4 | *Sd* | *Gb* | *Fa* | *Mc* |
| 5 | *Cc* | *Ka* | *Lb* | *Oe* |
| 6 | *Ka* | *Cc* | *Oe* | *Lb* |
| 7 | *Qb* | *Nd* | *Aa* | *Je* |
| 8 | *Nd* | *Qb* | *Je* | *Aa* |
| 9 | *Pa* | *Ee* | *Id* | *Hc* |
| 10 | *Ee* | *Pa* | *Hc* | *Id* |

30 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *BBc* | *AEe* | *AZa* | *AGb* |
| 2 | *AEe* | *BBc* | *AGb* | *AZa* |
| 3 | *AKa* | *ASd* | *AMc* | *ATe* |
| 4 | *ASd* | *AKa* | *ATe* | *AMc* |
| 5 | *AYe* | *ACc* | *AFa* | *ABb* |
| 6 | *ACc* | *AYe* | *ABb* | *AFa* |
| 7 | *BDe* | *APa* | *AXd* | *BAb* |
| 8 | *APa* | *BDe* | *BAb* | *AXd* |
| 9 | *AUa* | *AVb* | *AJe* | *ADd* |
| 10 | *AVb* | *AUa* | *ADd* | *AJe* |
| 11 | *AQb* | *ARc* | *BCd* | *AOe* |
| 12 | *ARc* | *AQb* | *AOe* | *BCd* |
| 13 | *AId* | *ALb* | *AHc* | *AAa* |
| 14 | *ALb* | *AId* | *AAa* | *AHc* |
| 15 | *ANd* | *ANd* | *AWc* | *AWc* |

40 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *AId* | *AFa* | *ABb* | *ACc* |
| 2 | *AFa* | *AId* | *ACc* | *ABb* |
| 3 | *BLc* | *BJa* | *BAb* | *AOe* |
| 4 | *BJa* | *BLc* | *AOe* | *BAb* |
| 5 | *BDe* | *BBc* | *BCd* | *AUa* |
| 6 | *BBc* | *BDe* | *AUa* | *BCd* |
| 7 | *ADd* | *AWc* | *AEe* | *BFb* |
| 8 | *AWc* | *ADd* | *BFb* | *AEe* |
| 9 | *BIe* | *BKb* | *BEa* | *AMc* |
| 10 | *BKb* | *BIe* | *AMc* | *BEa* |
| 11 | *BHd* | *AQb* | *BNe* | *AHc* |
| 12 | *AQb* | *BHd* | *AHc* | *BNe* |
| 13 | *AGb* | *ASd* | *BGc* | *APa* |
| 14 | *ASd* | *AGb* | *APa* | *BGc* |
| 15 | *AAa* | *ARc* | *AXd* | *AJe* |
| 16 | *ARc* | *AAa* | *AJe* | *AXd* |
| 17 | *ATe* | *ALb* | *AKa* | *BMd* |
| 18 | *ALb* | *ATe* | *BMd* | *AKa* |
| 19 | *AZa* | *AYe* | *ANd* | *AVb* |
| 20 | *AYe* | *AZa* | *AVb* | *ANd* |

## Eight-plex system

20 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Ka* | *Cc* | *Ee* | *Sd* | *Je* | *Mc* | *Fa* | *Qb* |
| 2 | *Cc* | *Ka* | *Sd* | *Ee* | *Mc* | *Je* | *Qb* | *Fa* |
| 3 | *Dd* | *Lb* | *Bb* | *Rc* | *Id* | *Pa* | *Te* | *Hc* |
| 4 | *Lb* | *Dd* | *Rc* | *Bb* | *Pa* | *Id* | *Hc* | *Te* |
| 5 | *Oe* | *Oe* | *Aa* | *Aa* | *Gb* | *Gb* | *Nd* | *Nd* |

40 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *BLc* | *BNe* | *AMc* | *ADd* | *BKb* | *AAa* | *AOe* | *AUa* |
| 2 | *BNe* | *BLc* | *ADd* | *AMc* | *AAa* | *BKb* | *AUa* | *AOe* |
| 3 | *ASd* | *AVb* | *AYe* | *BIe* | *BBc* | *AQb* | *ANd* | *BJa* |
| 4 | *AVb* | *ASd* | *BIe* | *AYe* | *AQb* | *BBc* | *BJa* | *ANd* |
| 5 | *AWc* | *AKa* | *BMd* | *AGb* | *AXd* | *BDe* | *ALb* | *AHc* |
| 6 | *AKa* | *AWc* | *AGb* | *BMd* | *BDe* | *AXd* | *AHc* | *ALb* |
| 7 | *AFa* | *BFb* | *APa* | *BGc* | *BHd* | *AJe* | *BAb* | *ACc* |
| 8 | *BFb* | *AFa* | *BGc* | *APa* | *AJe* | *BHd* | *ACc* | *BAb* |
| 9 | *ATe* | *BCd* | *ABb* | *BEa* | *AZa* | *ARc* | *AEe* | *AId* |
| 10 | *BCd* | *ATe* | *BEa* | *ABb* | *ARc* | *AZa* | *AId* | *AEe* |

Six Treatments

## Four-plex iTRAQ system

12 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Hb* | *Cc* | *Aa* | *Lf* |
| 2 | *Cc* | *Hb* | *Lf* | *Aa* |
| 3 | *Ff* | *Jd* | *Ke* | *Bb* |
| 4 | *Jd* | *Ff* | *Bb* | *Ke* |
| 5 | *Ga* | *Ee* | *Ic* | *Dd* |
| 6 | *Ee* | *Ga* | *Dd* | *Ic* |

18 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Jd* | *Oc* | *Ke* | *Lf* |
| 2 | *Oc* | *Jd* | *Lf* | *Ke* |
| 3 | *Aa* | *Bb* | *Cc* | *Rf* |
| 4 | *Bb* | *Aa* | *Rf* | *Cc* |
| 5 | *Ee* | *Ff* | *Ma* | *Nb* |
| 6 | *Ff* | *Ee* | *Nb* | *Ma* |
| 7 | *Qe* | *Ic* | *Ga* | *Pd* |
| 8 | *Ic* | *Qe* | *Pd* | *Ga* |
| 9 | *Hb* | *Hb* | *Dd* | *Dd* |

24 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | *Tag* | | | |
| *114* | *115* | *116* | *117* |
| 1 | *Jd* | *Uc* | *Ga* | *Nb* |
| 2 | *Uc* | *Jd* | *Nb* | *Ga* |
| 3 | *Bb* | *Dd* | *Cc* | *Xf* |
| 4 | *Dd* | *Bb* | *Xf* | *Cc* |
| 5 | *Ee* | *Lf* | *Hb* | *Pd* |
| 6 | *Lf* | *Ee* | *Pd* | *Hb* |
| 7 | *Ke* | *Aa* | *Vd* | *Rf* |
| 8 | *Aa* | *Ke* | *Rf* | *Vd* |
| 9 | *Oc* | *Ff* | *We* | *Sa* |
| 10 | *Ff* | *Oc* | *Sa* | *We* |
| 11 | *Tb* | *Ma* | *Qe* | *Ic* |
| 12 | *Ma* | *Tb* | *Ic* | *Qe* |

30 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *AWe* | *BDf* | *AIc* | *ANb* |
| 2 | *BDf* | *AWe* | *ANb* | *AIc* |
| 3 | *AMa* | *ACc* | *BBd* | *AXf* |
| 4 | *ACc* | *AMa* | *AXf* | *BBd* |
| 5 | *AVd* | *ARf* | *ASa* | *AKe* |
| 6 | *ARf* | *AVd* | *AKe* | *ASa* |
| 7 | *ATb* | *AYa* | *AEe* | *ADd* |
| 8 | *AYa* | *ATb* | *ADd* | *AEe* |
| 9 | *AGa* | *ABb* | *APd* | *AUc* |
| 10 | *ABb* | *AGa* | *AUc* | *APd* |
| 11 | *AQe* | *AJd* | *AHb* | *BAc* |
| 12 | *AJd* | *AQe* | *BAc* | *AHb* |
| 13 | *BCe* | *AOc* | *AAa* | *ALf* |
| 14 | *AOc* | *BCe* | *ALf* | *AAa* |
| 15 | *AZb* | *AZb* | *AFf* | *AFf* |

36 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | *Tag* | | | |
| *114* | *115* | *116* | *117* |
| 1 | *BHd* | *AMa* | *AUc* | *AHb* |
| 2 | *AMa* | *BHd* | *AHb* | *AUc* |
| 3 | *BGc* | *AZb* | *AKe* | *AGa* |
| 4 | *AZb* | *BGc* | *AGa* | *AKe* |
| 5 | *ASa* | *AIc* | *AXf* | *BIe* |
| 6 | *AIc* | *ASa* | *BIe* | *AXf* |
| 7 | *AYa* | *ACc* | *BDf* | *APd* |
| 8 | *ACc* | *AYa* | *APd* | *BDf* |
| 9 | *ARf* | *ATb* | *BBd* | *BCe* |
| 10 | *ATb* | *ARf* | *BCe* | *BBd* |
| 11 | *AWe* | *ALf* | *AAa* | *AVd* |
| 12 | *ALf* | *AWe* | *AVd* | *AAa* |
| 13 | *AFf* | *AQe* | *BAc* | *BFb* |
| 14 | *AQe* | *AFf* | *BFb* | *BAc* |
| 15 | *ADd* | *AEe* | *ABb* | *BEa* |
| 16 | *AEe* | *ADd* | *BEa* | *ABb* |
| 17 | *AJd* | *ANb* | *BJf* | *AOc* |
| 18 | *ANb* | *AJd* | *AOc* | *BJf* |

42 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *BFb* | *AQe* | *AMa* | *ACc* |
| 2 | *AQe* | *BFb* | *ACc* | *AMa* |
| 3 | *AEe* | *BLb* | *AJd* | *ASa* |
| 4 | *BLb* | *AEe* | *ASa* | *AJd* |
| 5 | *AXf* | *BBd* | *AUc* | *AZb* |
| 6 | *BBd* | *AXf* | *AZb* | *AUc* |
| 7 | *AOc* | *AHb* | *AKe* | *ARf* |
| 8 | *AHb* | *AOc* | *ARf* | *AKe* |
| 9 | *AVd* | *ANb* | *AFf* | *BOe* |
| 10 | *ANb* | *AVd* | *BOe* | *AFf* |
| 11 | *ADd* | *AGa* | *BMc* | *BIe* |
| 12 | *AGa* | *ADd* | *BIe* | *BMc* |
| 13 | *AYa* | *BAc* | *ALf* | *ATb* |
| 14 | *BAc* | *AYa* | *ATb* | *ALf* |
| 15 | *AAa* | *BCe* | *AIc* | *BJf* |
| 16 | *BCe* | *AAa* | *BJf* | *AIc* |
| 17 | *APd* | *BPf* | *ABb* | *BKa* |
| 18 | *BPf* | *APd* | *BKa* | *ABb* |
| 19 | *BEa* | *BDf* | *BNd* | *AWe* |
| 20 | *BDf* | *BEa* | *AWe* | *BNd* |
| 21 | *BGc* | *BGc* | *BHd* | *BHd* |

48 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *APd* | *BAc* | *BRb* | *BUe* |
| 2 | *BAc* | *APd* | *BUe* | *BRb* |
| 3 | *ARf* | *AQe* | *BMc* | *BFb* |
| 4 | *AQe* | *ARf* | *BFb* | *BMc* |
| 5 | *BTd* | *BKa* | *BVf* | *ACc* |
| 6 | *BKa* | *BTd* | *ACc* | *BVf* |
| 7 | *BSc* | *AVd* | *BQa* | *AKe* |
| 8 | *AVd* | *BSc* | *AKe* | *BQa* |
| 9 | *BEa* | *AUc* | *BOe* | *AFf* |
| 10 | *AUc* | *BEa* | *AFf* | *BOe* |
| 11 | *BDf* | *AHb* | *ADd* | *BGc* |
| 12 | *AHb* | *BDf* | *BGc* | *ADd* |
| 13 | *AOc* | *AYa* | *BHd* | *AZb* |
| 14 | *AYa* | *AOc* | *AZb* | *BHd* |
| 15 | *AMa* | *BPf* | *ABb* | *BNd* |
| 16 | *BPf* | *AMa* | *BNd* | *ABb* |
| 17 | *BLb* | *AEe* | *AIc* | *AAa* |
| 18 | *AEe* | *BLb* | *AAa* | *AIc* |
| 19 | *AWe* | *ANb* | *AJd* | *ALf* |
| 20 | *ANb* | *AWe* | *ALf* | *AJd* |
| 21 | *BCe* | *BBd* | *AGa* | *BJf* |
| 22 | *BBd* | *BCe* | *BJf* | *AGa* |
| 23 | *AXf* | *ATb* | *ASa* | *BIe* |
| 24 | *ATb* | *AXf* | *BIe* | *ASa* |

## Eight-plex system

24 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Qe* | *Ic* | *Lf* | *Ke* | *Vd* | *Ma* | *Oc* | *Hb* |
| 2 | *Ic* | *Qe* | *Ke* | *Lf* | *Ma* | *Vd* | *Hb* | *Oc* |
| 3 | *Rf* | *Bb* | *Cc* | *Dd* | *Nb* | *Ee* | *Xf* | *Ga* |
| 4 | *Bb* | *Rf* | *Dd* | *Cc* | *Ee* | *Nb* | *Ga* | *Xf* |
| 5 | *Jd* | *Aa* | *Sa* | *Tb* | *Uc* | *Ff* | *We* | *Pd* |
| 6 | *Aa* | *Jd* | *Tb* | *Sa* | *Ff* | *Uc* | *Pd* | *We* |

36 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *ARf* | *BEa* | *AJd* | *AIc* | *AQe* | *AGa* | *ALf* | *AZb* |
| 2 | *BEa* | *ARf* | *AIc* | *AJd* | *AGa* | *AQe* | *AZb* | *ALf* |
| 3 | *AVd* | *AKe* | *AYa* | *BDf* | *ABb* | *BAc* | *AUc* | *AWe* |
| 4 | *AKe* | *AVd* | *BDf* | *AYa* | *BAc* | *ABb* | *AWe* | *AUc* |
| 5 | *BCe* | *BJf* | *ACc* | *BFb* | *AOc* | *ADd* | *AAa* | *BHd* |
| 6 | *BJf* | *BCe* | *BFb* | *ACc* | *ADd* | *AOc* | *BHd* | *AAa* |
| 7 | *AMa* | *BGc* | *ANb* | *AEe* | *AFf* | *AHb* | *ASa* | *BBd* |
| 8 | *BGc* | *AMa* | *AEe* | *ANb* | *AHb* | *AFf* | *BBd* | *ASa* |
| 9 | *ATb* | *ATb* | *APd* | *APd* | *AXf* | *AXf* | *BIe* | *BIe* |

48 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *APd* | *AMa* | *BCe* | *AHb* | *BOe* | *AIc* | *BNd* | *ALf* |
| 2 | *AMa* | *APd* | *AHb* | *BCe* | *AIc* | *BOe* | *ALf* | *BNd* |
| 3 | *BVf* | *BFb* | *BGc* | *AVd* | *AFf* | *BAc* | *AAa* | *AQe* |
| 4 | *BFb* | *BVf* | *AVd* | *BGc* | *BAc* | *AFf* | *AQe* | *AAa* |
| 5 | *BPf* | *AJd* | *ARf* | *AZb* | *ANb* | *AEe* | *AUc* | *ASa* |
| 6 | *AJd* | *BPf* | *AZb* | *ARf* | *AEe* | *ANb* | *ASa* | *AUc* |
| 7 | *BSc* | *BIe* | *ACc* | *AGa* | *AXf* | *BKa* | *BLb* | *BBd* |
| 8 | *BIe* | *BSc* | *AGa* | *ACc* | *BKa* | *AXf* | *BBd* | *BLb* |
| 9 | *BRb* | *BEa* | *BUe* | *ADd* | *BHd* | *ABb* | *AOc* | *BJf* |
| 10 | *BEa* | *BRb* | *ADd* | *BUe* | *ABb* | *BHd* | *BJf* | *AOc* |
| 11 | *AKe* | *BMc* | *BDf* | *BQa* | *AYa* | *BTd* | *AWe* | *ATb* |
| 12 | *BMc* | *AKe* | *BQa* | *BDf* | *BTd* | *AYa* | *ATb* | *AWe* |

# Seven Treatments

## Four-plex system

14 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Aa* | *Dd* | *Jc* | *Ib* |
| 2 | *Dd* | *Aa* | *Ib* | *Jc* |
| 3 | *Ff* | *Ng* | *Ee* | *Kd* |
| 4 | *Ng* | *Ff* | *Kd* | *Ee* |
| 5 | *Le* | *Cc* | *Ha* | *Mf* |
| 6 | *Cc* | *Le* | *Mf* | *Ha* |
| 7 | *Bb* | *Bb* | *Gg* | *Gg* |

28 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *AAa* | *AJc* | *ALe* | *ANg* |
| 2 | *AJc* | *AAa* | *ANg* | *ALe* |
| 3 | *AUg* | *AKd* | *BAf* | *AVa* |
| 4 | *AKd* | *AUg* | *AVa* | *BAf* |
| 5 | *AHa* | *AWb* | *AZe* | *AMf* |
| 6 | *AWb* | *AHa* | *AMf* | *AZe* |
| 7 | *AQc* | *ADd* | *AOa* | *ABb* |
| 8 | *ADd* | *AQc* | *ABb* | *AOa* |
| 9 | *AIb* | *ASe* | *AGg* | *ARd* |
| 10 | *ASe* | *AIb* | *ARd* | *AGg* |
| 11 | *BBg* | *AFf* | *ACc* | *APb* |
| 12 | *AFf* | *BBg* | *APb* | *ACc* |
| 13 | *AEe* | *ATf* | *AYd* | *AXc* |
| 14 | *ATf* | *AEe* | *AXc* | *AYd* |

42 Phase 1 experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *APb* | *AHa* | *AMf* | *AXc* |
| 2 | *AHa* | *APb* | *AXc* | *AMf* |
| 3 | *BLc* | *AKd* | *AOa* | *AGg* |
| 4 | *AKd* | *BLc* | *AGg* | *AOa* |
| 5 | *ATf* | *BNe* | *ACc* | *BCa* |
| 6 | *BNe* | *ATf* | *BCa* | *ACc* |
| 7 | *AZe* | *BBg* | *BMd* | *AVa* |
| 8 | *BBg* | *AZe* | *AVa* | *BMd* |
| 9 | *AAa* | *BFd* | *AWb* | *BHf* |
| 10 | *BFd* | *AAa* | *BHf* | *AWb* |
| 11 | *BDb* | *ANg* | *AQc* | *ARd* |
| 12 | *ANg* | *BDb* | *ARd* | *AQc* |
| 13 | *BGe* | *BJa* | *AIb* | *AUg* |
| 14 | *BJa* | *BGe* | *AUg* | *AIb* |
| 15 | *BIg* | *BEc* | *AEe* | *BKb* |
| 16 | *BEc* | *BIg* | *BKb* | *AEe* |
| 17 | *AYd* | *ABb* | *ALe* | *AFf* |
| 18 | *ABb* | *AYd* | *AFf* | *ALe* |
| 19 | *BAf* | *AJc* | *ADd* | *ASe* |
| 20 | *AJc* | *BAf* | *ASe* | *ADd* |
| 21 | *BOf* | *BOf* | *BPg* | *BPg* |

56 Phase 1 experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *AXc* | *BGe* | *BBg* | *AIb* |
| 2 | *BGe* | *AXc* | *AIb* | *BBg* |
| 3 | *BFd* | *BVf* | *BNe* | *BDb* |
| 4 | *BVf* | *BFd* | *BDb* | *BNe* |
| 5 | *AKd* | *CCf* | *BIg* | *BUe* |
| 6 | *CCf* | *AKd* | *BUe* | *BIg* |
| 7 | *AUg* | *AOa* | *CBe* | *BOf* |
| 8 | *AOa* | *AUg* | *BOf* | *CBe* |
| 9 | *AZe* | *APb* | *BJa* | *BMd* |
| 10 | *APb* | *AZe* | *BMd* | *BJa* |
| 11 | *BCa* | *ANg* | *BKb* | *BTd* |
| 12 | *ANg* | *BCa* | *BTd* | *BKb* |
| 13 | *CAd* | *BRb* | *AJc* | *AMf* |
| 14 | *BRb* | *CAd* | *AMf* | *AJc* |
| 15 | *AFf* | *ABb* | *AAa* | *BPg* |
| 16 | *ABb* | *AFf* | *BPg* | *AAa* |
| 17 | *BYb* | *AEe* | *BZc* | *BWg* |
| 18 | *AEe* | *BYb* | *BWg* | *BZc* |
| 19 | *CDg* | *ACc* | *BHf* | *AYd* |
| 20 | *ACc* | *CDg* | *AYd* | *BHf* |
| 21 | *BSc* | *BAf* | *AHa* | *ASe* |
| 22 | *BAf* | *BSc* | *ASe* | *AHa* |
| 23 | *BXa* | *AGg* | *ADd* | *BLc* |
| 24 | *AGg* | *BXa* | *BLc* | *ADd* |
| 25 | *AQc* | *BQa* | *ATf* | *AWb* |
| 26 | *BQa* | *AQc* | *AWb* | *ATf* |
| 27 | *ALe* | *ARd* | *AVa* | *BEc* |
| 28 | *ARd* | *ALe* | *BEc* | *AVa* |

## Eight-plex system

28 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *AGg* | *ABb* | *ALe* | *AJc* | *AOa* | *BAf* | *AYd* | *AVa* |
| 2 | *ABb* | *AGg* | *AJc* | *ALe* | *BAf* | *AOa* | *AVa* | *AYd* |
| 3 | *AQc* | *AEe* | *ATf* | *AHa* | *AKd* | *AZe* | *ANg* | *AWb* |
| 4 | *AEe* | *AQc* | *AHa* | *ATf* | *AZe* | *AKd* | *AWb* | *ANg* |
| 5 | *AMf* | *AAa* | *AIb* | *ARd* | *AXc* | *AUg* | *AFf* | *ASe* |
| 6 | *AAa* | *AMf* | *ARd* | *AIb* | *AUg* | *AXc* | *ASe* | *AFf* |
| 7 | *ADd* | *ADd* | *BBg* | *BBg* | *APb* | *APb* | *ACc* | *ACc* |

56 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *ACc* | *AHa* | *AFf* | *AGg* | *ABb* | *ADd* | *AEe* | *AAa* |
| 2 | *AHa* | *ACc* | *AGg* | *AFf* | *ADd* | *ABb* | *AAa* | *AEe* |
| 3 | *ANg* | *AKd* | *APb* | *AMf* | *AOa* | *ALe* | *AJc* | *AIb* |
| 4 | *AKd* | *ANg* | *AMf* | *APb* | *ALe* | *AOa* | *AIb* | *AJc* |
| 5 | *ARd* | *AWb* | *AXc* | *AVa* | *ATf* | *ASe* | *AQc* | *AUg* |
| 6 | *AWb* | *ARd* | *AVa* | *AXc* | *ASe* | *ATf* | *AUg* | *AQc* |
| 7 | *BDb* | *AZe* | *AYd* | *BCa* | *BEc* | *BBg* | *BFd* | *BAf* |
| 8 | *AZe* | *BDb* | *BCa* | *AYd* | *BBg* | *BEc* | *BAf* | *BFd* |
| 9 | *BGe* | *BHf* | *BIg* | *BMd* | *BLc* | *BJa* | *BNe* | *BKb* |
| 10 | *BHf* | *BGe* | *BMd* | *BIg* | *BJa* | *BLc* | *BKb* | *BNe* |
| 11 | *BOf* | *BSc* | *BYb* | *CBe* | *BTd* | *CDg* | *BPg* | *BQa* |
| 12 | *BSc* | *BOf* | *CBe* | *BYb* | *CDg* | *BTd* | *BQa* | *BPg* |
| 13 | *BXa* | *BWg* | *BZc* | *BUe* | *CCf* | *BRb* | *CAd* | *BVf* |
| 14 | *BWg* | *BXa* | *BUe* | *BZc* | *BRb* | *CCf* | *BVf* | *CAd* |

# Eight Treatments

## Four-plex system

16 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Og* | *Ia* | *Ee* | *Hh* |
| 2 | *Ia* | *Og* | *Hh* | *Ee* |
| 3 | *Jb* | *Me* | *Dd* | *Ff* |
| 4 | *Me* | *Jb* | *Ff* | *Dd* |
| 5 | *Ph* | *Nf* | *Kc* | *Gg* |
| 6 | *Nf* | *Ph* | *Gg* | *Kc* |
| 7 | *Ld* | *Cc* | *Aa* | *Bb* |
| 8 | *Cc* | *Ld* | *Bb* | *Aa* |

24 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *Bb* | *Vf* | *Ue* | *Wg* |
| 2 | *Vf* | *Bb* | *Wg* | *Ue* |
| 3 | *Ld* | *Me* | *Sc* | *Gg* |
| 4 | *Me* | *Ld* | *Gg* | *Sc* |
| 5 | *Qa* | *Cc* | *Jb* | *Td* |
| 6 | *Cc* | *Qa* | *Td* | *Jb* |
| 7 | *Rb* | *Ph* | *Kc* | *Nf* |
| 8 | *Ph* | *Rb* | *Nf* | *Kc* |
| 9 | *Ee* | *Og* | *Ia* | *Hh* |
| 10 | *Og* | *Ee* | *Hh* | *Ia* |
| 11 | *Xh* | *Dd* | *Ff* | *Aa* |
| 12 | *Dd* | *Xh* | *Aa* | *Ff* |

32 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *APh* | *ANf* | *ASc* | *AJb* |
| 2 | *ANf* | *APh* | *AJb* | *ASc* |
| 3 | *AVf* | *AXh* | *AMe* | *ALd* |
| 4 | *AXh* | *AVf* | *ALd* | *AMe* |
| 5 | *ADd* | *BAc* | *BCe* | *AYa* |
| 6 | *BAc* | *ADd* | *AYa* | *BCe* |
| 7 | *ARb* | *AQa* | *BFh* | *ATd* |
| 8 | *AQa* | *ARb* | *ATd* | *BFh* |
| 9 | *BEg* | *ABb* | *AFf* | *AAa* |
| 10 | *ABb* | *BEg* | *AAa* | *AFf* |
| 11 | *AOg* | *BBd* | *ACc* | *BDf* |
| 12 | *BBd* | *AOg* | *BDf* | *ACc* |
| 13 | *AIa* | *AEe* | *AHh* | *AWg* |
| 14 | *AEe* | *AIa* | *AWg* | *AHh* |
| 15 | *AUe* | *AKc* | *AGg* | *AZb* |
| 16 | *AKc* | *AUe* | *AZb* | *AGg* |

40 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *BFh* | *AVf* | *AKc* | *AGg* |
| 2 | *AVf* | *BFh* | *AGg* | *AKc* |
| 3 | *ARb* | *BBd* | *BCe* | *ACc* |
| 4 | *BBd* | *ARb* | *ACc* | *BCe* |
| 5 | *BAc* | *AMe* | *AHh* | *AYa* |
| 6 | *AMe* | *BAc* | *AYa* | *AHh* |
| 7 | *ANf* | *AUe* | *AXh* | *ALd* |
| 8 | *AUe* | *ANf* | *ALd* | *AXh* |
| 9 | *AJb* | *BJd* | *AOg* | *APh* |
| 10 | *BJd* | *AJb* | *APh* | *AOg* |
| 11 | *AIa* | *BMg* | *BKe* | *ATd* |
| 12 | *BMg* | *AIa* | *ATd* | *BKe* |
| 13 | *AQa* | *BEg* | *BHb* | *ASc* |
| 14 | *BEg* | *AQa* | *ASc* | *BHb* |
| 15 | *AFf* | *BNh* | *AZb* | *BGa* |
| 16 | *BNh* | *AFf* | *BGa* | *AZb* |
| 17 | *AEe* | *ABb* | *BDf* | *AWg* |
| 18 | *ABb* | *AEe* | *AWg* | *BDf* |
| 19 | *BIc* | *AAa* | *BLf* | *ADd* |
| 20 | *AAa* | *BIc* | *ADd* | *BLf* |

48 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *BIc* | *BBd* | *BSe* | *BDf* |
| 2 | *BBd* | *BIc* | *BDf* | *BSe* |
| 3 | *BRd* | *AQa* | *BKe* | *BPb* |
| 4 | *AQa* | *BRd* | *BPb* | *BKe* |
| 5 | *BQc* | *BNh* | *BGa* | *AOg* |
| 6 | *BNh* | *BQc* | *AOg* | *BGa* |
| 7 | *BJd* | *BUg* | *ASc* | *AZb* |
| 8 | *BUg* | *BJd* | *AZb* | *ASc* |
| 9 | *AAa* | *AVf* | *BCe* | *AXh* |
| 10 | *AVf* | *AAa* | *AXh* | *BCe* |
| 11 | *BAc* | *BVh* | *ATd* | *BOa* |
| 12 | *BVh* | *BAc* | *BOa* | *ATd* |
| 13 | *BMg* | *AEe* | *BTf* | *ACc* |
| 14 | *AEe* | *BMg* | *ACc* | *BTf* |
| 15 | *ARb* | *AUe* | *AWg* | *AYa* |
| 16 | *AUe* | *ARb* | *AYa* | *AWg* |
| 17 | *ABb* | *AMe* | *AKc* | *AHh* |
| 18 | *AMe* | *ABb* | *AHh* | *AKc* |
| 19 | *BEg* | *BFh* | *BLf* | *BHb* |
| 20 | *BFh* | *BEg* | *BHb* | *BLf* |
| 21 | *AIa* | *AFf* | *ADd* | *AGg* |
| 22 | *AFf* | *AIa* | *AGg* | *ADd* |
| 23 | *ANf* | *AJb* | *APh* | *ALd* |
| 24 | *AJb* | *ANf* | *ALd* | *APh* |

56 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *BLf* | *AJb* | *BNh* | *BYc* |
| 2 | *AJb* | *BLf* | *BYc* | *BNh* |
| 3 | *BAc* | *ALd* | *ANf* | *BCe* |
| 4 | *ALd* | *BAc* | *BCe* | *ANf* |
| 5 | *AAa* | *BVh* | *BBd* | *AEe* |
| 6 | *BVh* | *AAa* | *AEe* | *BBd* |
| 7 | *AQa* | *ASc* | *AVf* | *ADd* |
| 8 | *ASc* | *AQa* | *ADd* | *AVf* |
| 9 | *AHh* | *BJd* | *AGg* | *CBf* |
| 10 | *BJd* | *AHh* | *CBf* | *AGg* |
| 11 | *BRd* | *BSe* | *AWg* | *ARb* |
| 12 | *BSe* | *BRd* | *ARb* | *AWg* |
| 13 | *BPb* | *BGa* | *BZd* | *BFh* |
| 14 | *BGa* | *BPb* | *BFh* | *BZd* |
| 15 | *BDf* | *BKe* | *BXb* | *AXh* |
| 16 | *BKe* | *BDf* | *AXh* | *BXb* |
| 17 | *CCg* | *BTf* | *AMe* | *BOa* |
| 18 | *BTf* | *CCg* | *BOa* | *AMe* |
| 19 | *CAe* | *BIc* | *AYa* | *AZb* |
| 20 | *BIc* | *CAe* | *AZb* | *AYa* |
| 21 | *APh* | *AUe* | *BQc* | *AOg* |
| 22 | *AUe* | *APh* | *AOg* | *BQc* |
| 23 | *AIa* | *CDh* | *BMg* | *AKc* |
| 24 | *CDh* | *AIa* | *AKc* | *BMg* |
| 25 | *BEg* | *AFf* | *BWa* | *BHb* |
| 26 | *AFf* | *BEg* | *BHb* | *BWa* |
| 27 | *ABb* | *BUg* | *ATd* | *ACc* |
| 28 | *BUg* | *ABb* | *ACc* | *ATd* |

64 Phase 1 Experimental units

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Run | Tag | | | |
| 114 | 115 | 116 | 117 |
| 1 | *BWa* | *AXh* | *AUe* | *ALd* |
| 2 | *AXh* | *BWa* | *ALd* | *AUe* |
| 3 | *AIa* | *BEg* | *ATd* | *ACc* |
| 4 | *BEg* | *AIa* | *ACc* | *ATd* |
| 5 | *BYc* | *BPb* | *APh* | *CKg* |
| 6 | *BPb* | *BYc* | *CKg* | *APh* |
| 7 | *CHd* | *BXb* | *BKe* | *BIc* |
| 8 | *BXb* | *CHd* | *BIc* | *BKe* |
| 9 | *AHh* | *BCe* | *BUg* | *BQc* |
| 10 | *BCe* | *AHh* | *BQc* | *BUg* |
| 11 | *BFh* | *BJd* | *BTf* | *CEa* |
| 12 | *BJd* | *BFh* | *CEa* | *BTf* |
| 13 | *AEe* | *BLf* | *AGg* | *CDh* |
| 14 | *BLf* | *AEe* | *CDh* | *AGg* |
| 15 | *BHb* | *CAe* | *AVf* | *AYa* |
| 16 | *CAe* | *BHb* | *AYa* | *AVf* |
| 17 | *ASc* | *AQa* | *CFb* | *CLh* |
| 18 | *AQa* | *ASc* | *CLh* | *CFb* |
| 19 | *ANf* | *BAc* | *BGa* | *AMe* |
| 20 | *BAc* | *ANf* | *AMe* | *BGa* |
| 21 | *BSe* | *CGc* | *CBf* | *ABb* |
| 22 | *CGc* | *BSe* | *ABb* | *CBf* |
| 23 | *AJb* | *ADd* | *BDf* | *CCg* |
| 24 | *ADd* | *AJb* | *CCg* | *BDf* |
| 25 | *BMg* | *BBd* | *CIe* | *AAa* |
| 26 | *BBd* | *BMg* | *AAa* | *CIe* |
| 27 | *BVh* | *AFf* | *BRd* | *AZb* |
| 28 | *AFf* | *BVh* | *AZb* | *BRd* |
| 29 | *AWg* | *BOa* | *ARb* | *BNh* |
| 30 | *BOa* | *AWg* | *BNh* | *ARb* |
| 31 | *AOg* | *CJf* | *BZd* | *AKc* |
| 32 | *CJf* | *AOg* | *AKc* | *BZd* |

Eight-plex system

16 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Hh* | *Ia* | *Cc* | *Ld* | *Bb* | *Ee* | *Gg* | *Ff* |
| 2 | *Ia* | *Hh* | *Ld* | *Cc* | *Ee* | *Bb* | *Ff* | *Gg* |
| 3 | *Nf* | *Jb* | *Aa* | *Og* | *Kc* | *Dd* | *Ph* | *Me* |
| 4 | *Jb* | *Nf* | *Og* | *Aa* | *Dd* | *Kc* | *Me* | *Ph* |

24 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *Ph* | *Ff* | *Ee* | *Qa* | *Rb* | *Og* | *Ld* | *Sc* |
| 2 | *Ff* | *Ph* | *Qa* | *Ee* | *Og* | *Rb* | *Sc* | *Ld* |
| 3 | *Bb* | *Ue* | *Xh* | *Dd* | *Kc* | *Aa* | *Vf* | *Gg* |
| 4 | *Ue* | *Bb* | *Dd* | *Xh* | *Aa* | *Kc* | *Gg* | *Vf* |
| 5 | *Wg* | *Td* | *Jb* | *Cc* | *Hh* | *Nf* | *Me* | *Ia* |
| 6 | *Td* | *Wg* | *Cc* | *Jb* | *Nf* | *Hh* | *Ia* | *Me* |

32 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *AAa* | *ABb* | *ACc* | *ADd* | *AEe* | *AFf* | *AGg* | *AHh* |
| 2 | *ABb* | *AAa* | *ADd* | *ACc* | *AFf* | *AEe* | *AHh* | *AGg* |
| 3 | *AKc* | *ALd* | *AIa* | *AJb* | *AOg* | *APh* | *AMe* | *ANf* |
| 4 | *ALd* | *AKc* | *AJb* | *AIa* | *APh* | *AOg* | *ANf* | *AMe* |
| 5 | *AUe* | *AVf* | *AWg* | *AXh* | *AQa* | *ARb* | *ASc* | *ATd* |
| 6 | *AVf* | *AUe* | *AXh* | *AWg* | *ARb* | *AQa* | *ATd* | *ASc* |
| 7 | *BEg* | *BFh* | *BCe* | *BDf* | *BAc* | *BBd* | *AYa* | *AZb* |
| 8 | *BFh* | *BEg* | *BDf* | *BCe* | *BBd* | *BAc* | *AZb* | *AYa* |

40 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *AAa* | *AFf* | *ACc* | *AEe* | *ADd* | *ABb* | *AHh* | *AGg* |
| 2 | *AFf* | *AAa* | *AEe* | *ACc* | *ABb* | *ADd* | *AGg* | *AHh* |
| 3 | *AOg* | *APh* | *ALd* | *AIa* | *AMe* | *ANf* | *AJb* | *AKc* |
| 4 | *APh* | *AOg* | *AIa* | *ALd* | *ANf* | *AMe* | *AKc* | *AJb* |
| 5 | *ARb* | *ATd* | *AXh* | *AQa* | *AUe* | *AWg* | *ASc* | *AVf* |
| 6 | *ATd* | *ARb* | *AQa* | *AXh* | *AWg* | *AUe* | *AVf* | *ASc* |
| 7 | *AZb* | *BBd* | *BEg* | *BFh* | *BAc* | *AYa* | *BCe* | *BDf* |
| 8 | *BBd* | *AZb* | *BFh* | *BEg* | *AYa* | *BAc* | *BDf* | *BCe* |
| 9 | *BKe* | *BIc* | *BHb* | *BLf* | *BMg* | *BNh* | *BJd* | *BGa* |
| 10 | *BIc* | *BKe* | *BLf* | *BHb* | *BNh* | *BMg* | *BGa* | *BJd* |

48 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *AGg* | *ABb* | *AFf* | *AAa* | *ADd* | *ACc* | *AHh* | *AEe* |
| 2 | *ABb* | *AGg* | *AAa* | *AFf* | *ACc* | *ADd* | *AEe* | *AHh* |
| 3 | *APh* | *AOg* | *AKc* | *ALd* | *AIa* | *AMe* | *ANf* | *AJb* |
| 4 | *AOg* | *APh* | *ALd* | *AKc* | *AMe* | *AIa* | *AJb* | *ANf* |
| 5 | *AUe* | *AVf* | *ASc* | *AWg* | *AXh* | *ARb* | *AQa* | *ATd* |
| 6 | *AVf* | *AUe* | *AWg* | *ASc* | *ARb* | *AXh* | *ATd* | *AQa* |
| 7 | *BDf* | *AYa* | *BFh* | *BEg* | *BAc* | *AZb* | *BBd* | *BCe* |
| 8 | *AYa* | *BDf* | *BEg* | *BFh* | *AZb* | *BAc* | *BCe* | *BBd* |
| 9 | *BIc* | *BJd* | *BHb* | *BKe* | *BLf* | *BMg* | *BGa* | *BNh* |
| 10 | *BJd* | *BIc* | *BKe* | *BHb* | *BMg* | *BLf* | *BNh* | *BGa* |
| 11 | *BVh* | *BOa* | *BRd* | *BPb* | *BSe* | *BTf* | *BUg* | *BQc* |
| 12 | *BOa* | *BVh* | *BPb* | *BRd* | *BTf* | *BSe* | *BQc* | *BUg* |

56 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *ADd* | *AGg* | *AEe* | *AHh* | *AFf* | *AAa* | *ACc* | *ABb* |
| 2 | *AGg* | *ADd* | *AHh* | *AEe* | *AAa* | *AFf* | *ABb* | *ACc* |
| 3 | *ANf* | *AIa* | *ALd* | *AJb* | *AOg* | *APh* | *AMe* | *AKc* |
| 4 | *AIa* | *ANf* | *AJb* | *ALd* | *APh* | *AOg* | *AKc* | *AMe* |
| 5 | *ARb* | *AUe* | *AWg* | *AVf* | *ATd* | *ASc* | *AQa* | *AXh* |
| 6 | *AUe* | *ARb* | *AVf* | *AWg* | *ASc* | *ATd* | *AXh* | *AQa* |
| 7 | *AZb* | *BDf* | *BAc* | *AYa* | *BFh* | *BCe* | *BBd* | *BEg* |
| 8 | *BDf* | *AZb* | *AYa* | *BAc* | *BCe* | *BFh* | *BEg* | *BBd* |
| 9 | *BIc* | *BVh* | *BGa* | *BRd* | *BTf* | *BPb* | *BSe* | *BUg* |
| 10 | *BVh* | *BIc* | *BRd* | *BGa* | *BPb* | *BTf* | *BUg* | *BSe* |
| 11 | *BQc* | *BMg* | *BNh* | *BHb* | *BKe* | *BJd* | *BLf* | *BOa* |
| 12 | *BMg* | *BQc* | *BHb* | *BNh* | *BJd* | *BKe* | *BOa* | *BLf* |
| 13 | *CDh* | *BWa* | *BYc* | *CAe* | *CCg* | *BXb* | *BZd* | *CBf* |
| 14 | *BWa* | *CDh* | *CAe* | *BYc* | *BXb* | *CCg* | *CBf* | *BZd* |

64 Phase 1 Experimental units

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Run | Tag | | | | | | | |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 121 |
| 1 | *AAa* | *ABb* | *ACc* | *ADd* | *AEe* | *AFf* | *AGg* | *AHh* |
| 2 | *ABb* | *AAa* | *ADd* | *ACc* | *AFf* | *AEe* | *AHh* | *AGg* |
| 3 | *AIa* | *AJb* | *AKc* | *ALd* | *AMe* | *ANf* | *AOg* | *APh* |
| 4 | *AJb* | *AIa* | *ALd* | *AKc* | *ANf* | *AMe* | *APh* | *AOg* |
| 5 | *ASc* | *ATd* | *AQa* | *ARb* | *AWg* | *AXh* | *AUe* | *AVf* |
| 6 | *ATd* | *ASc* | *ARb* | *AQa* | *AXh* | *AWg* | *AVf* | *AUe* |
| 7 | *BAc* | *BBd* | *AYa* | *AZb* | *BEg* | *BFh* | *BCe* | *BDf* |
| 8 | *BBd* | *BAc* | *AZb* | *AYa* | *BFh* | *BEg* | *BDf* | *BCe* |
| 9 | *BKe* | *BLf* | *BMg* | *BNh* | *BGa* | *BHb* | *BIc* | *BJd* |
| 10 | *BLf* | *BKe* | *BNh* | *BMg* | *BHb* | *BGa* | *BJd* | *BIc* |
| 11 | *BSe* | *BTf* | *BUg* | *BVh* | *BOa* | *BPb* | *BQc* | *BRd* |
| 12 | *BTf* | *BSe* | *BVh* | *BUg* | *BPb* | *BOa* | *BRd* | *BQc* |
| 13 | *CCg* | *CDh* | *CAe* | *CBf* | *BYc* | *BZd* | *BWa* | *BXb* |
| 14 | *CDh* | *CCg* | *CBf* | *CAe* | *BZd* | *BYc* | *BXb* | *BWa* |
| 15 | *CKg* | *CLh* | *CIe* | *CJf* | *CGc* | *CHd* | *CEa* | *CFb* |
| 16 | *CLh* | *CKg* | *CJf* | *CIe* | *CHd* | *CGc* | *CFb* | *CEa* |