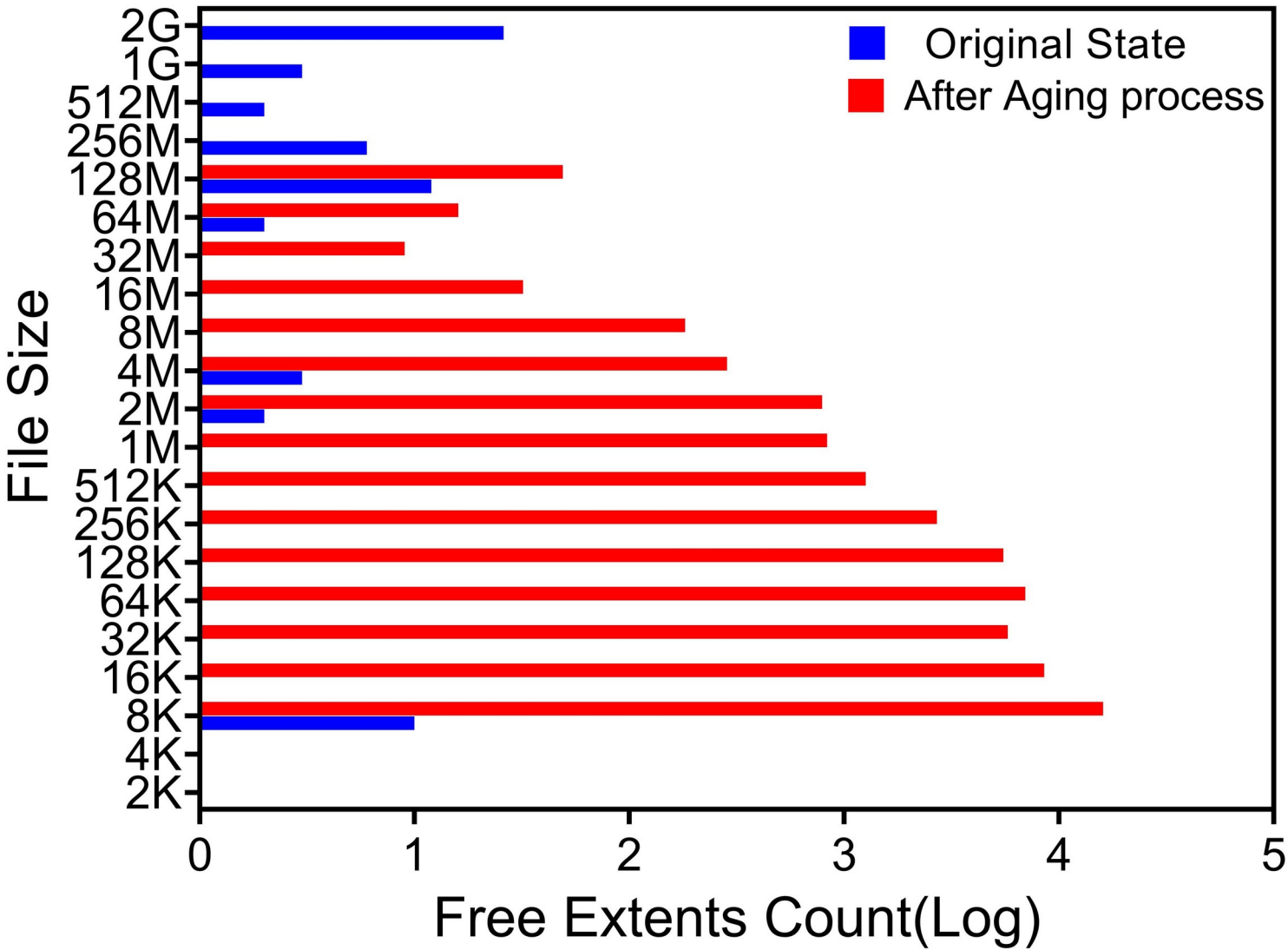
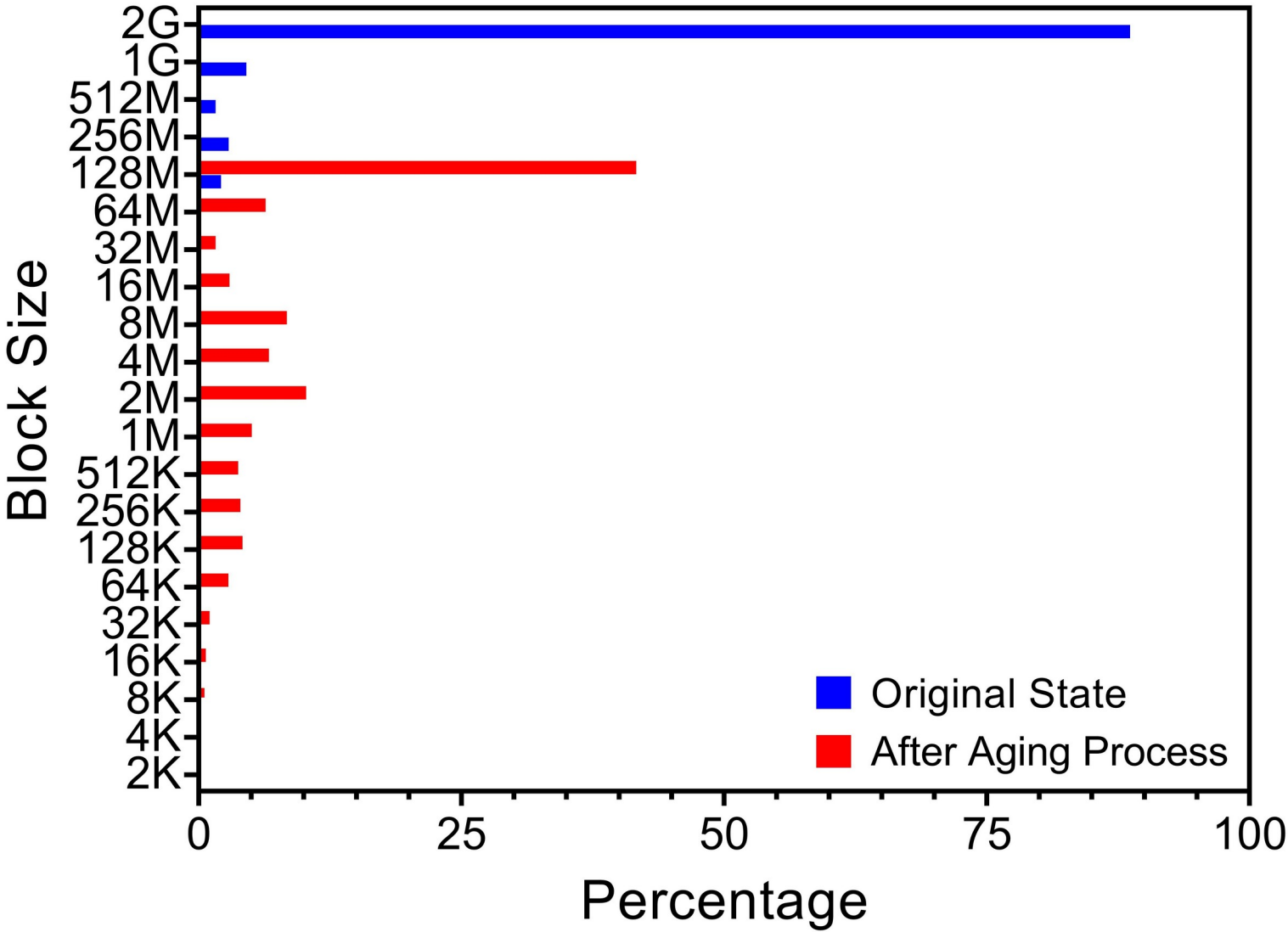
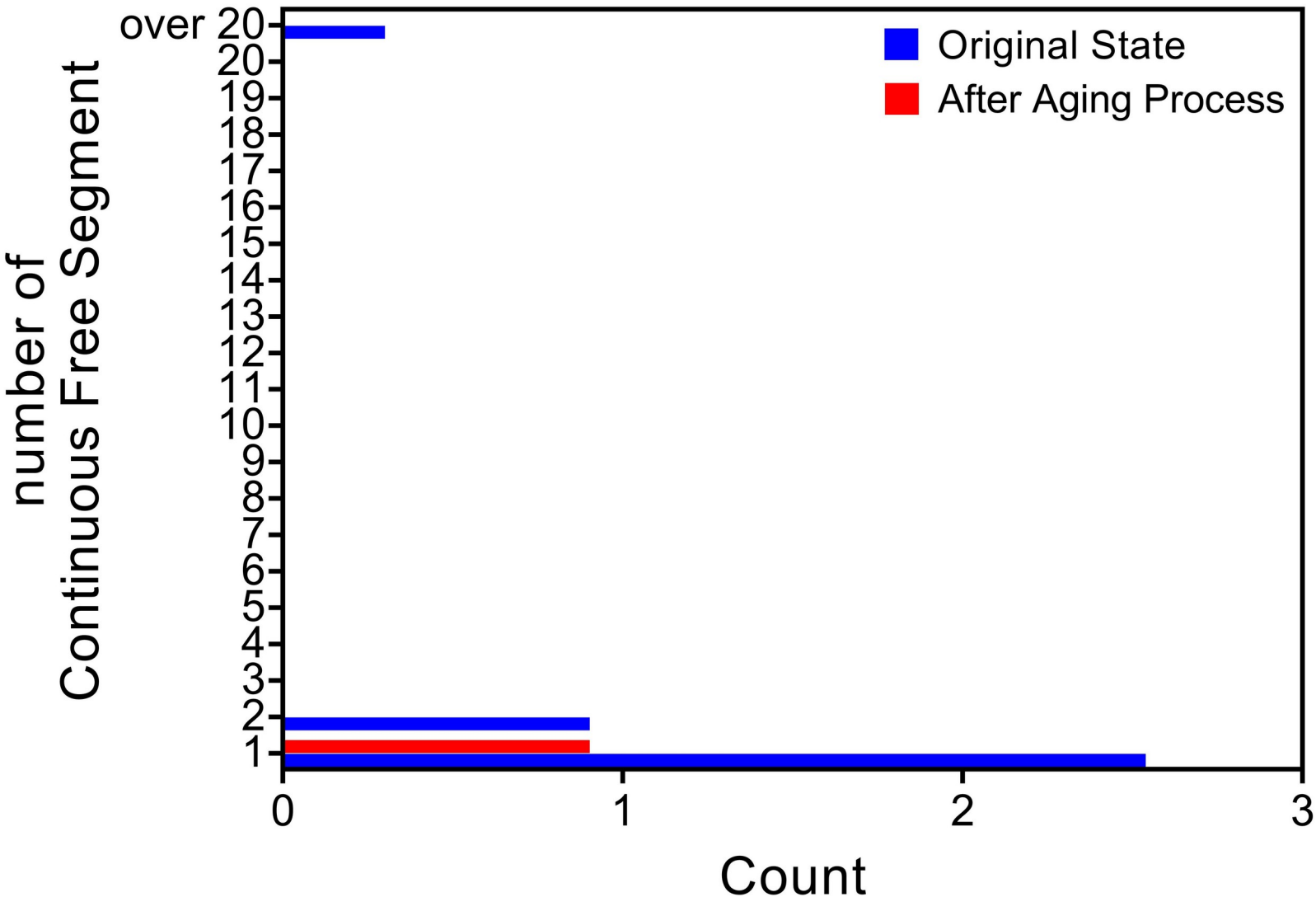
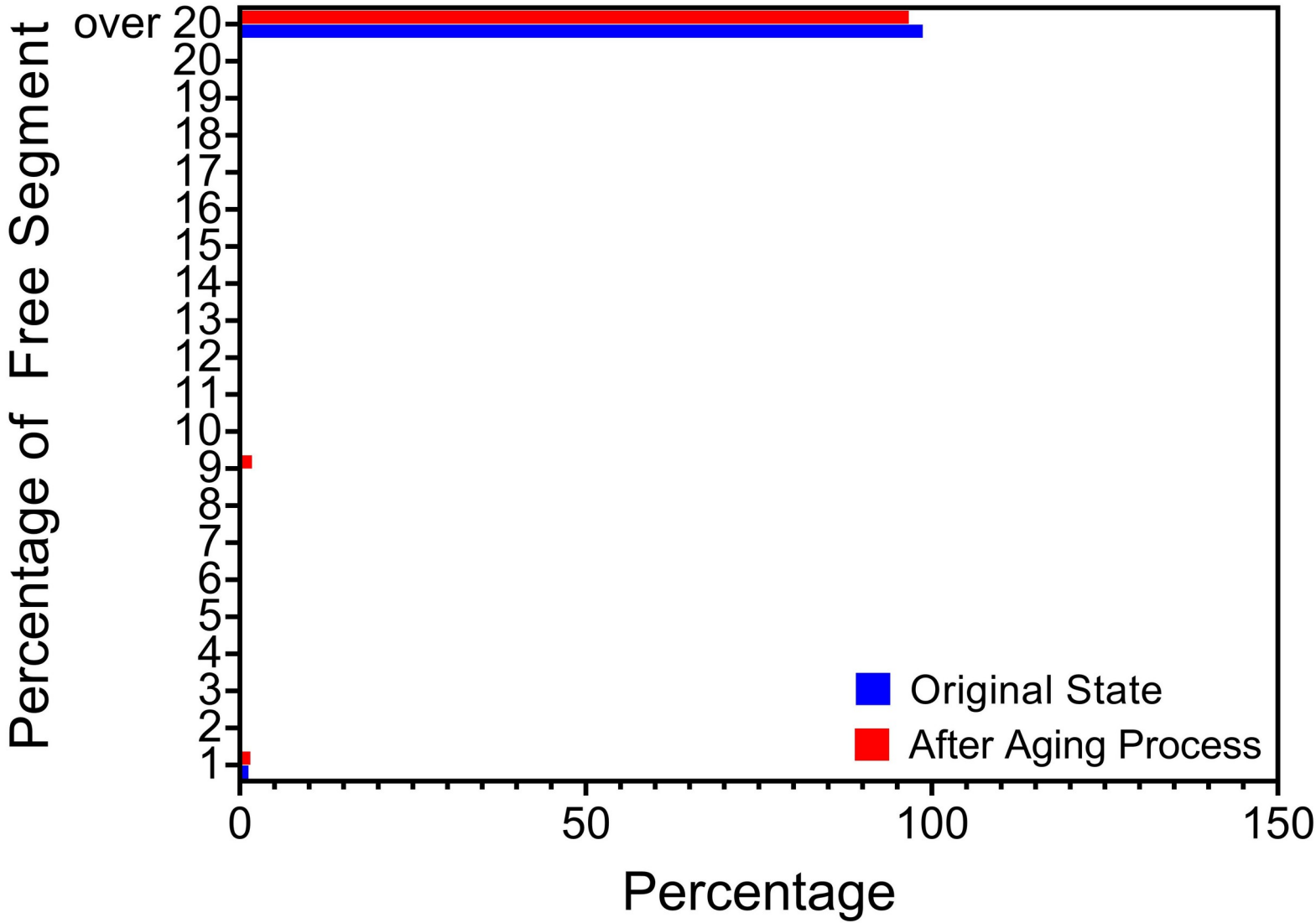
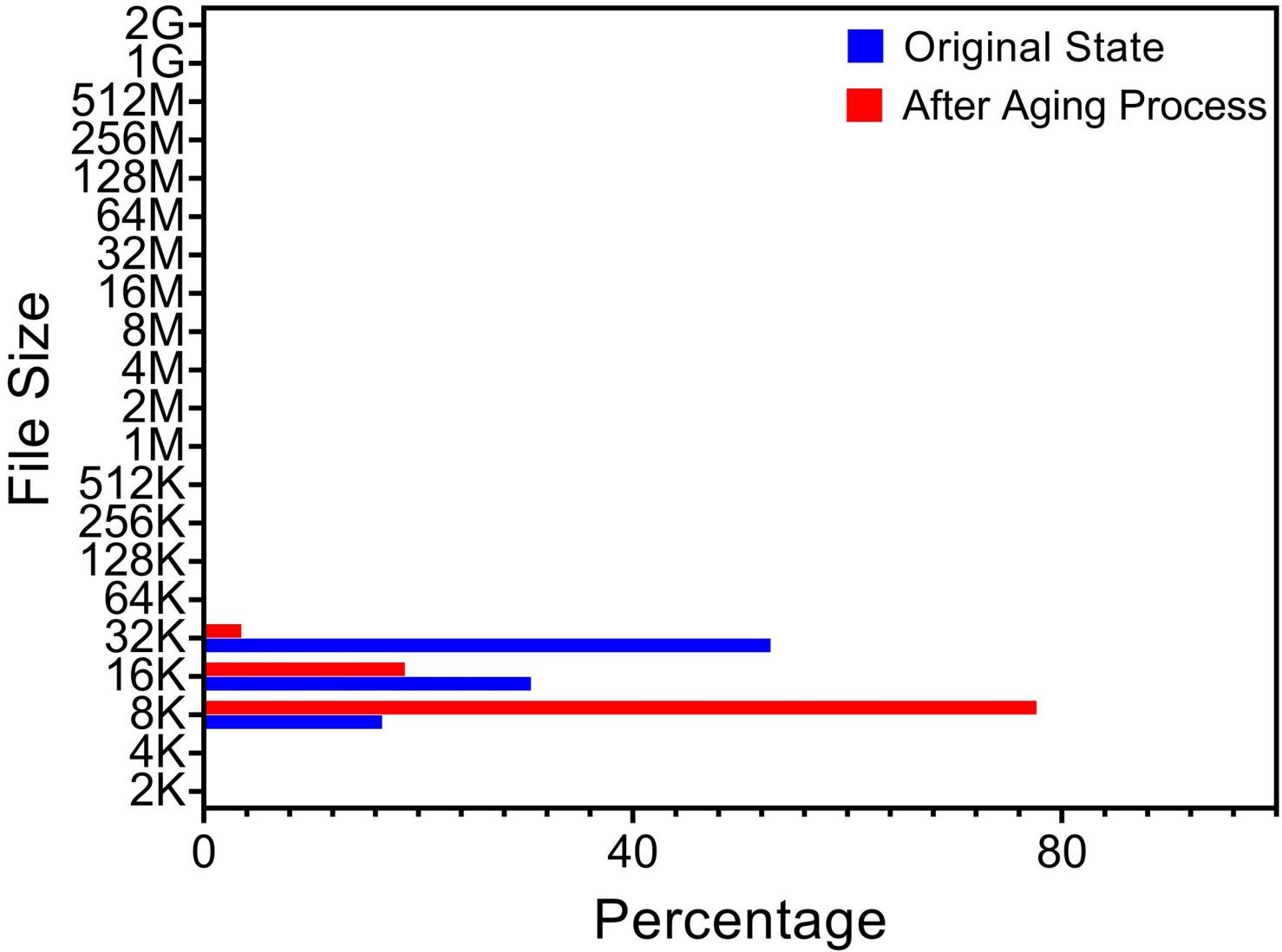
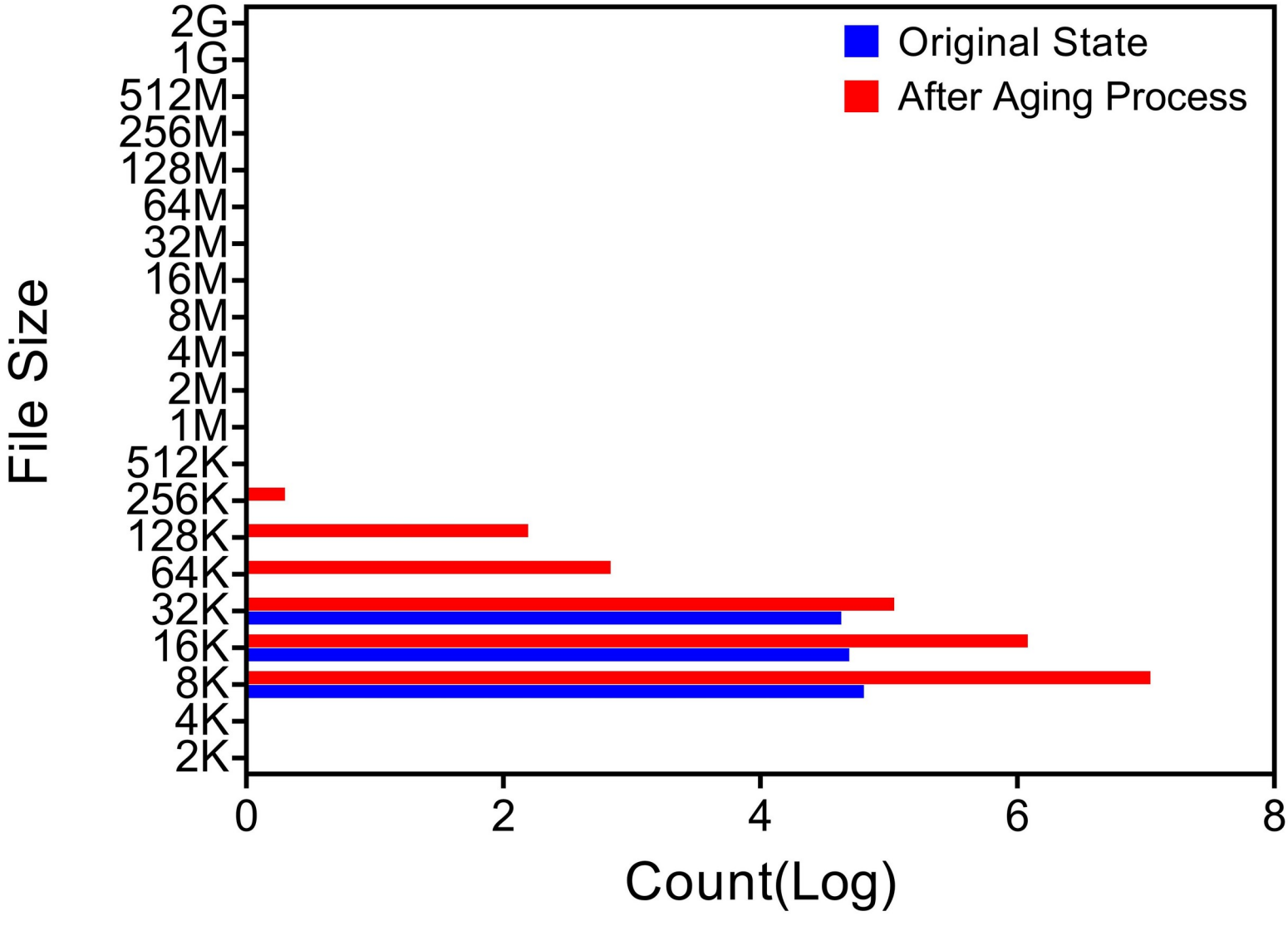

Original State
After Aging process
File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
1
2
3
4
5
Free Extents Count(Log)

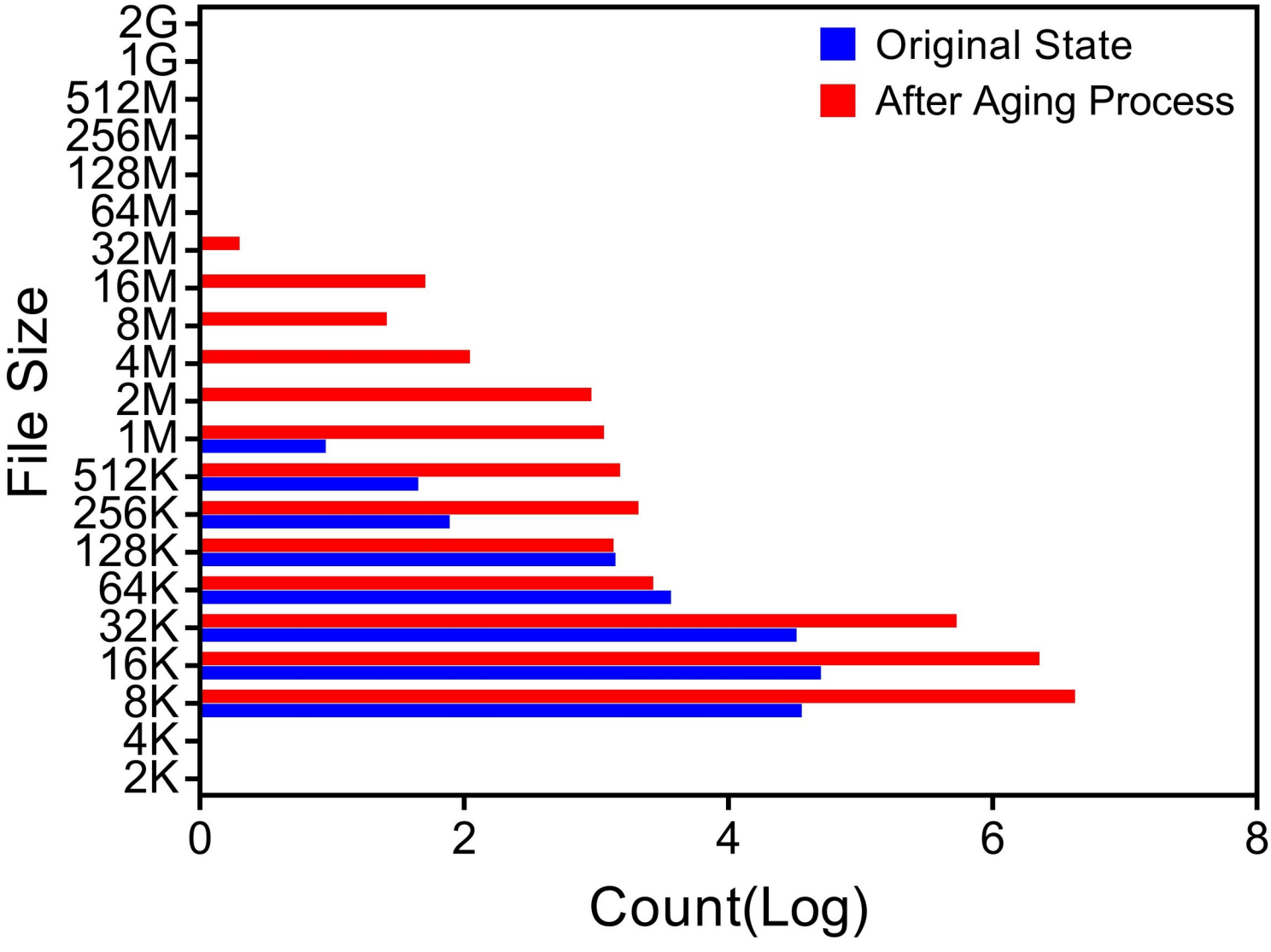

Block Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
25
50
75
100
Percentage
Original State
After Aging Process

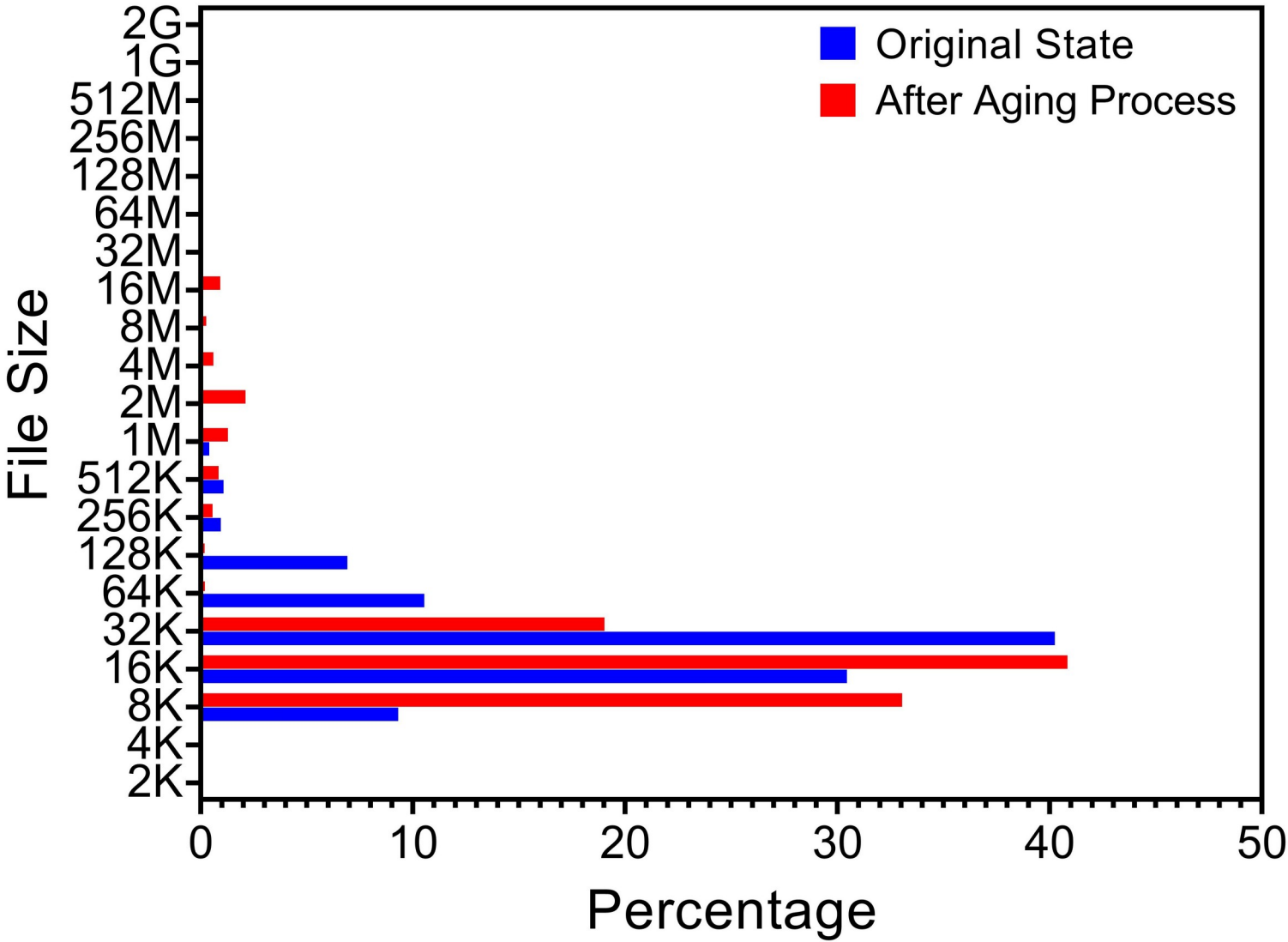

Original State
After Aging Process
number of
Continuous Free Segment
over 20
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
1
2
3
Count

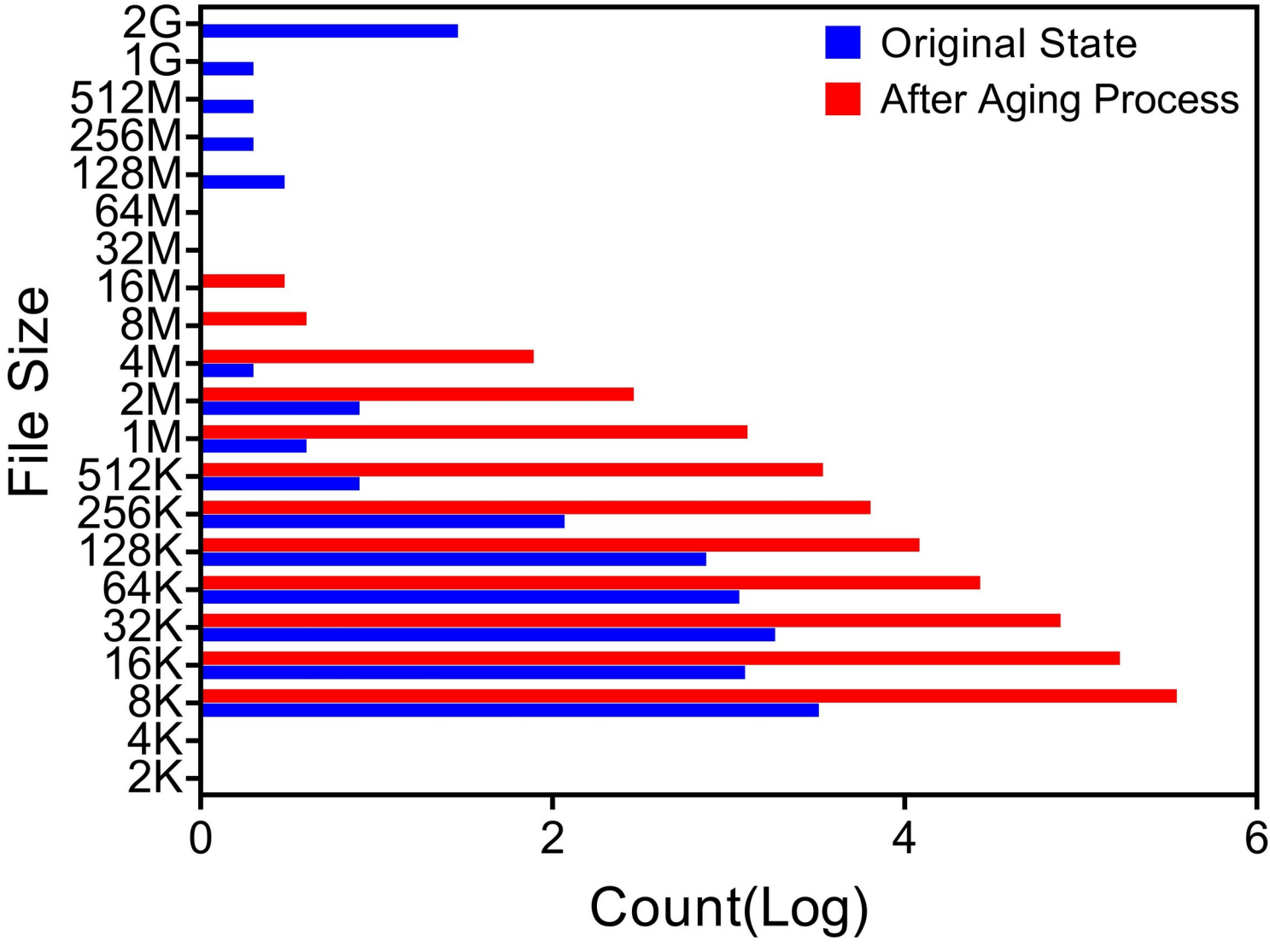

Percentage of Free Segment
over 20
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
50
100
150
Percentage
Original State
After Aging Process

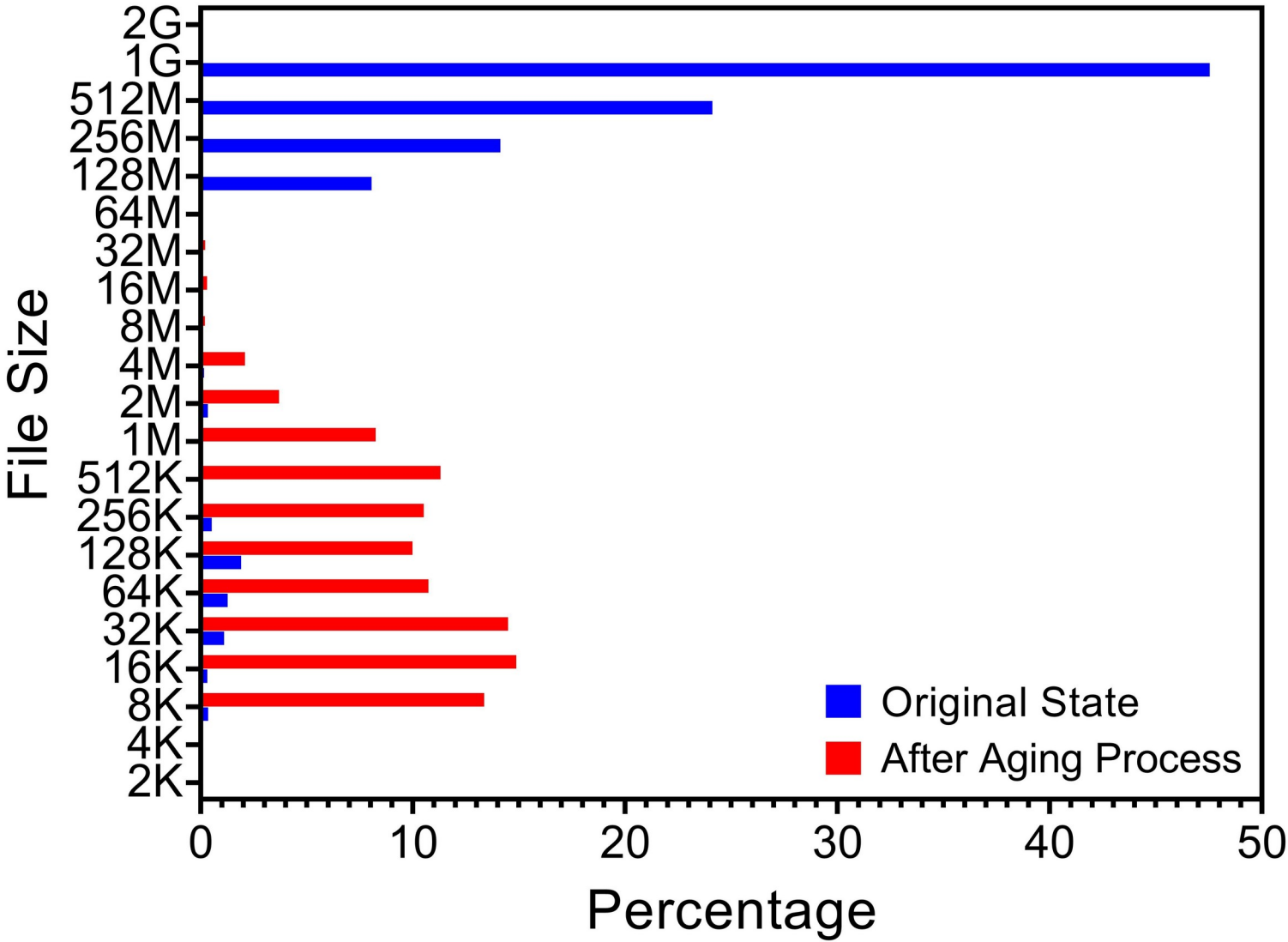

Original State
After Aging Process
File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
40
80
Percentage

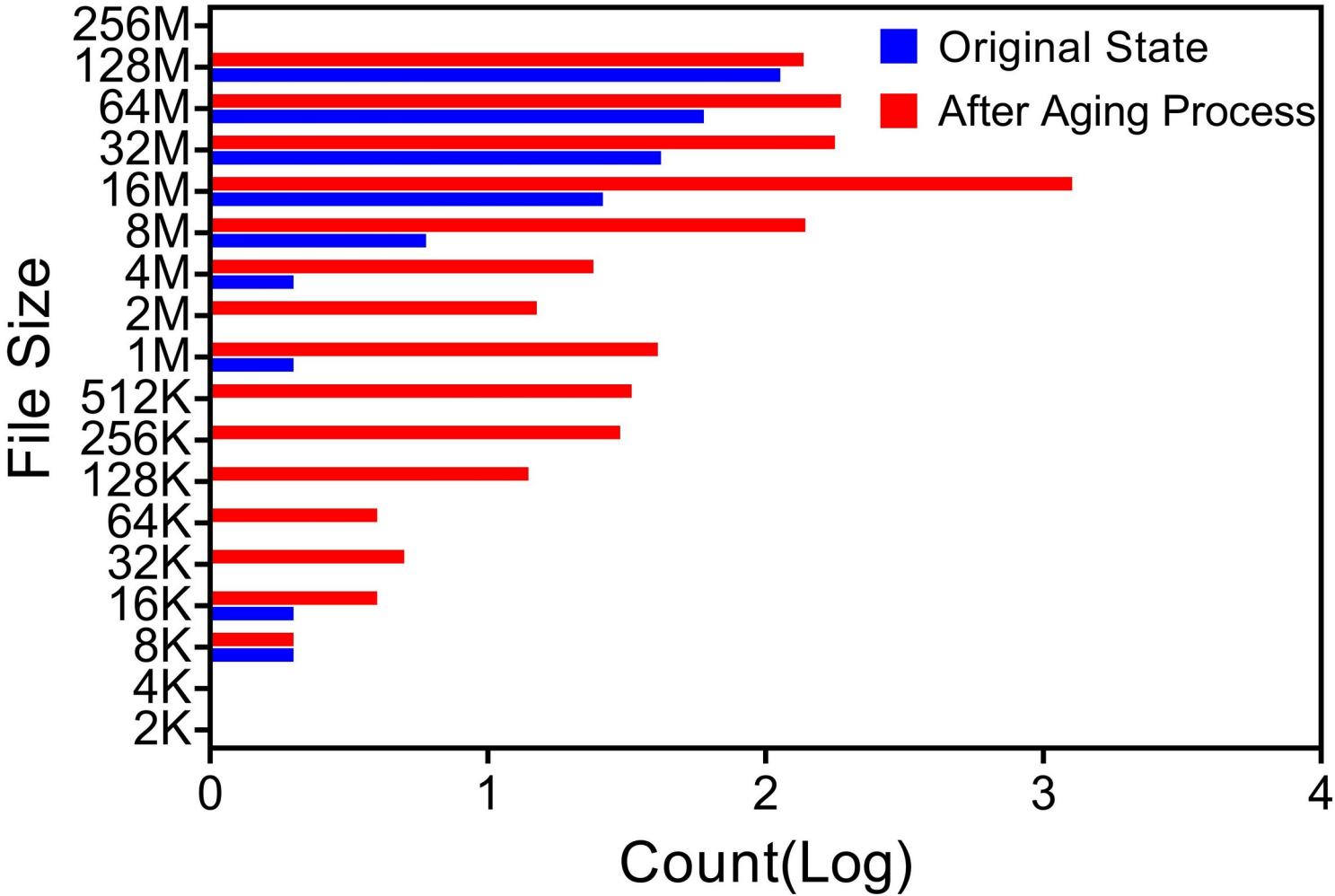

Original State
After Aging Process
File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
2
4
6
8
Count(Log)

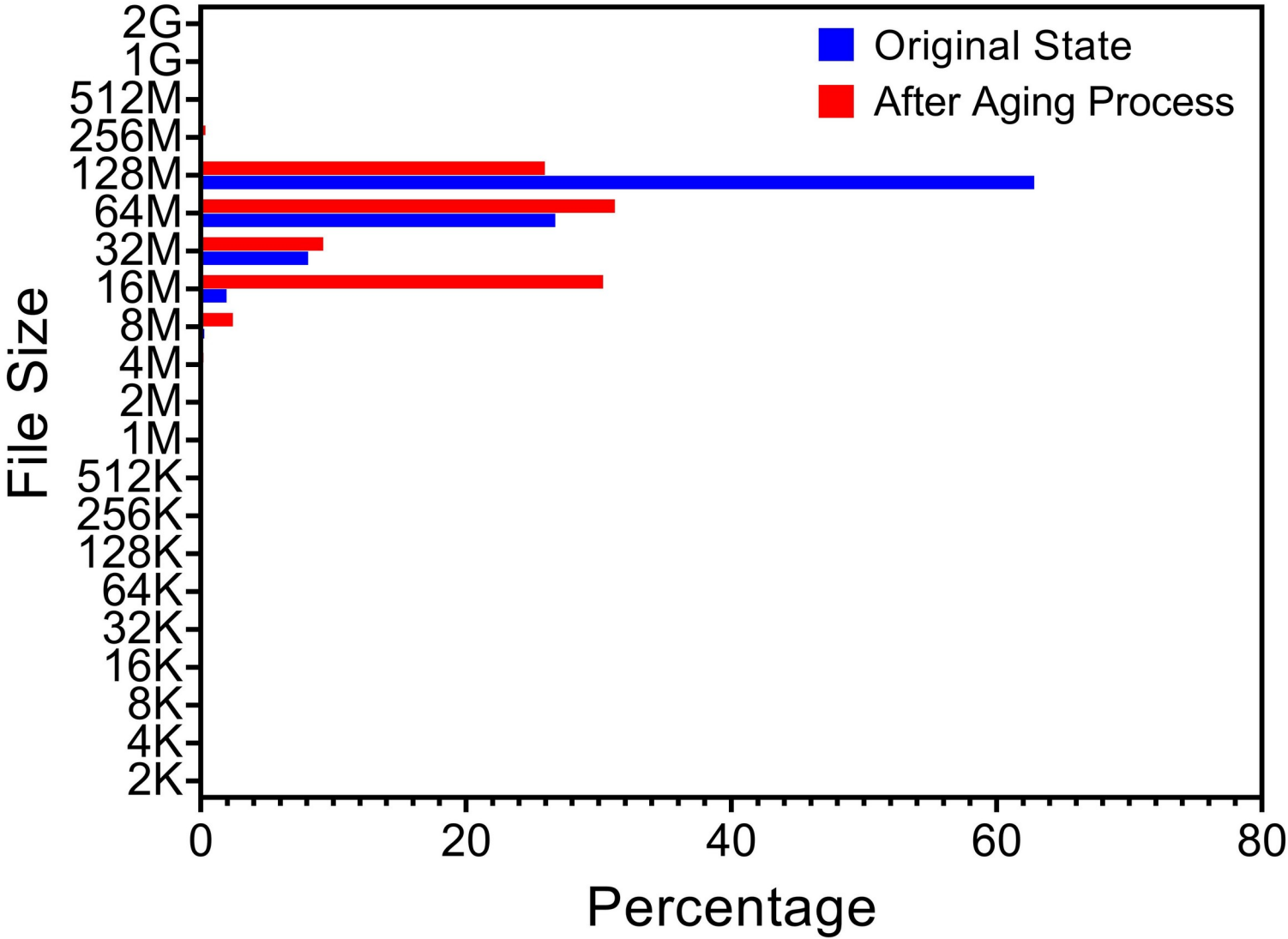

Original State
After Aging Process
File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
2
4
6
8
Count(Log)

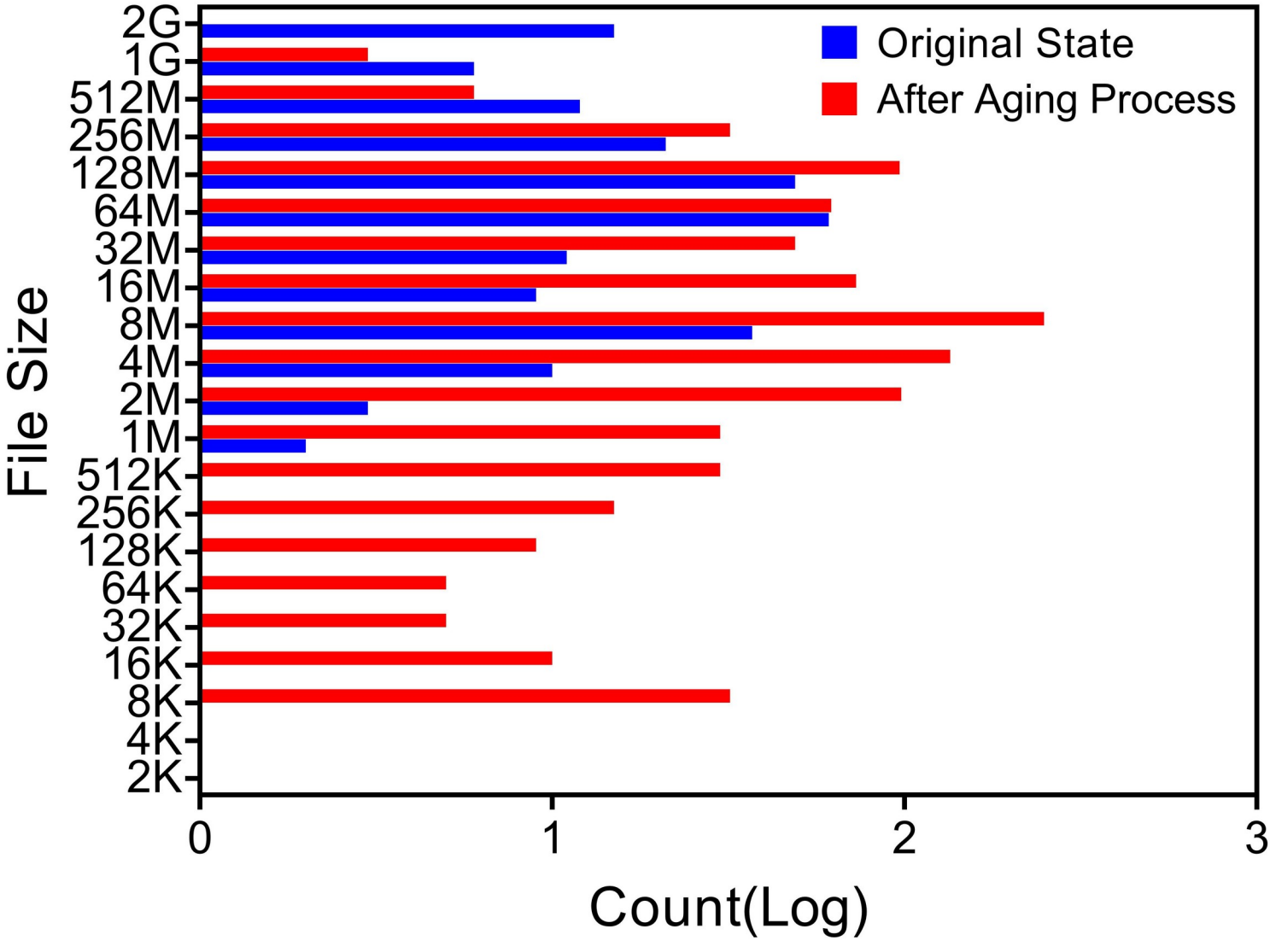

Original State
After Aging Process
File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
10
20
30
40
50
Percentage

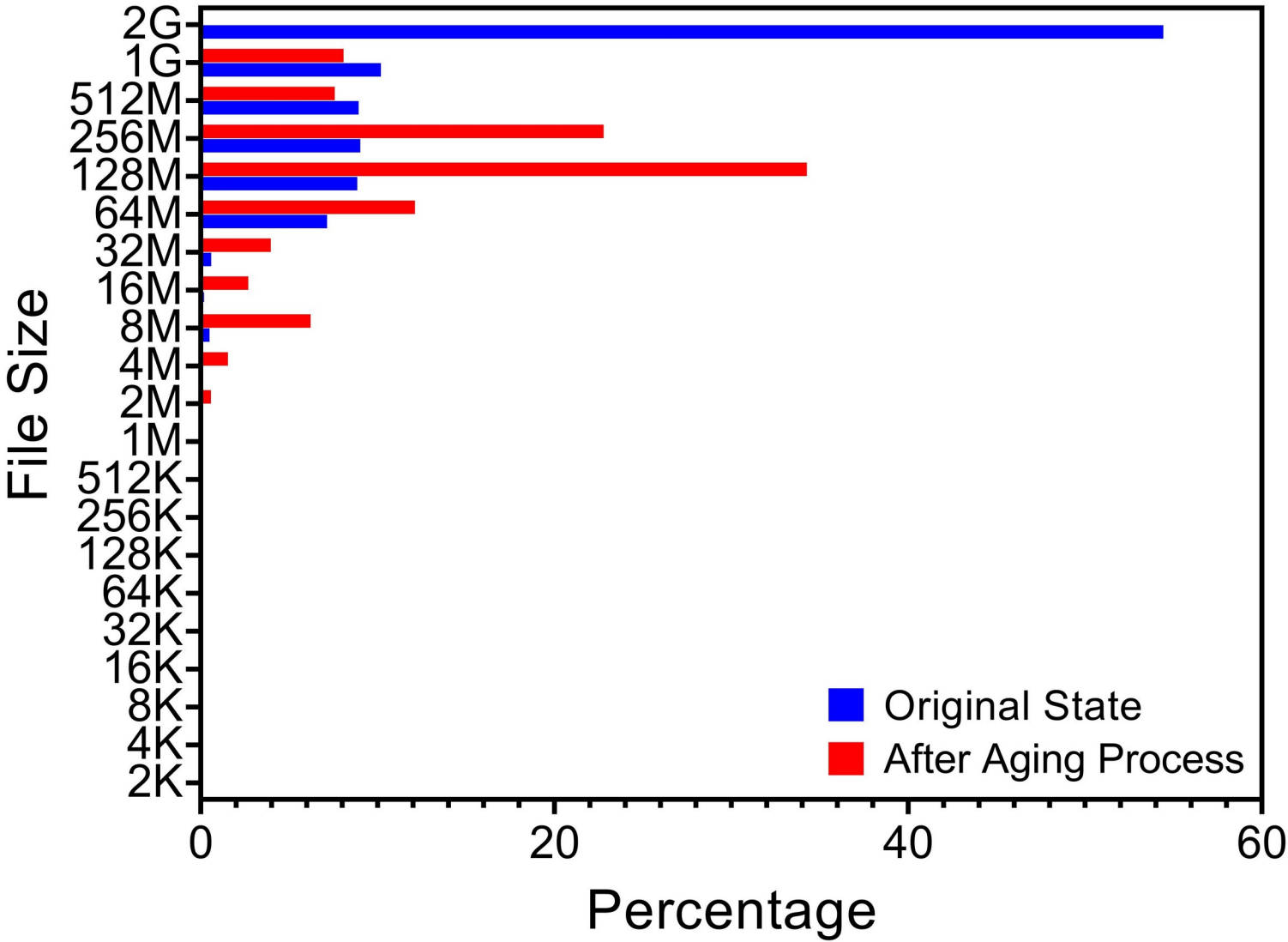

Original State
After Aging Process
File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
2
4
6
Count(Log)

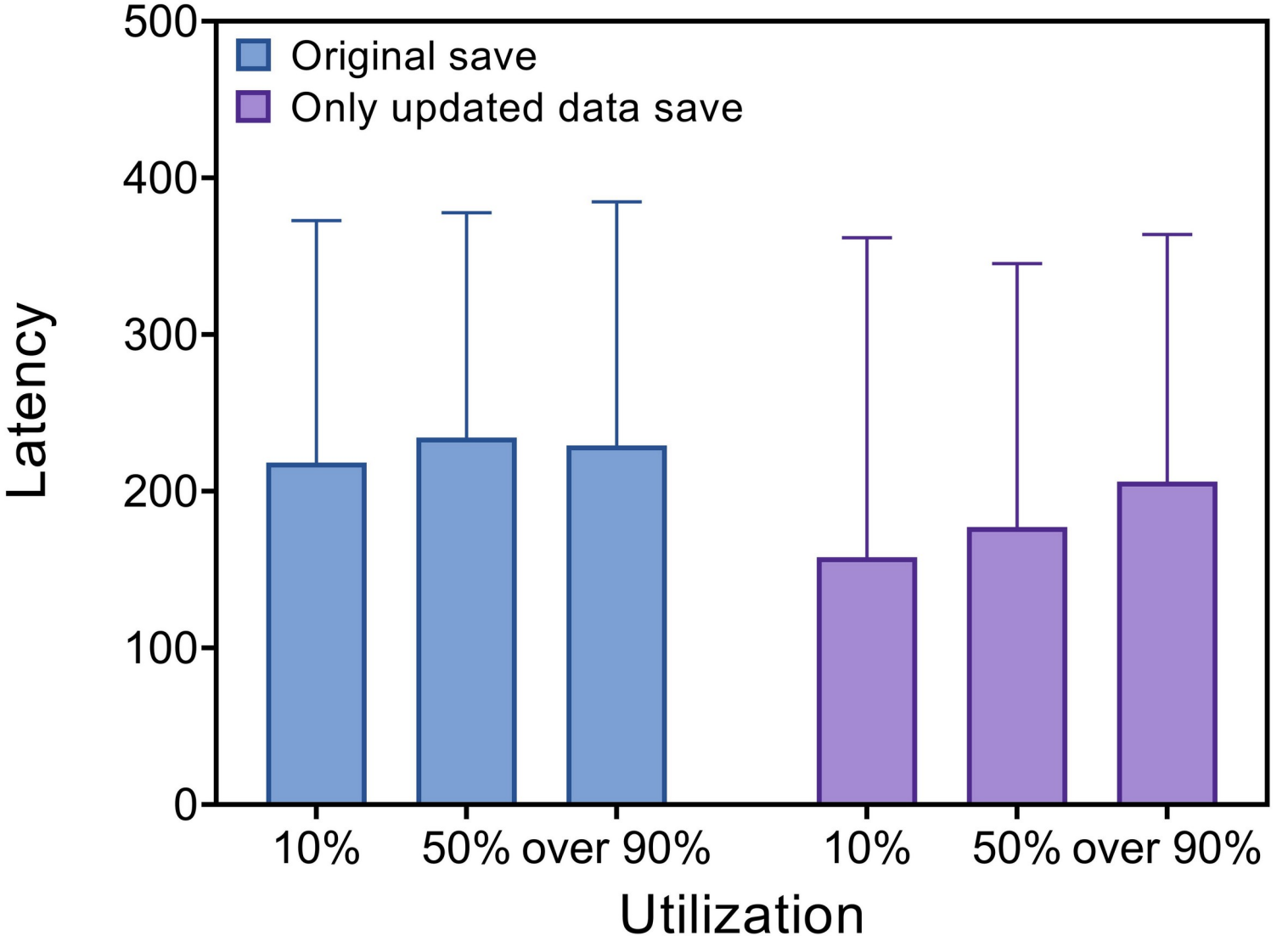

File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
10
20
30
40
50
Percentage
Original State
After Aging Process

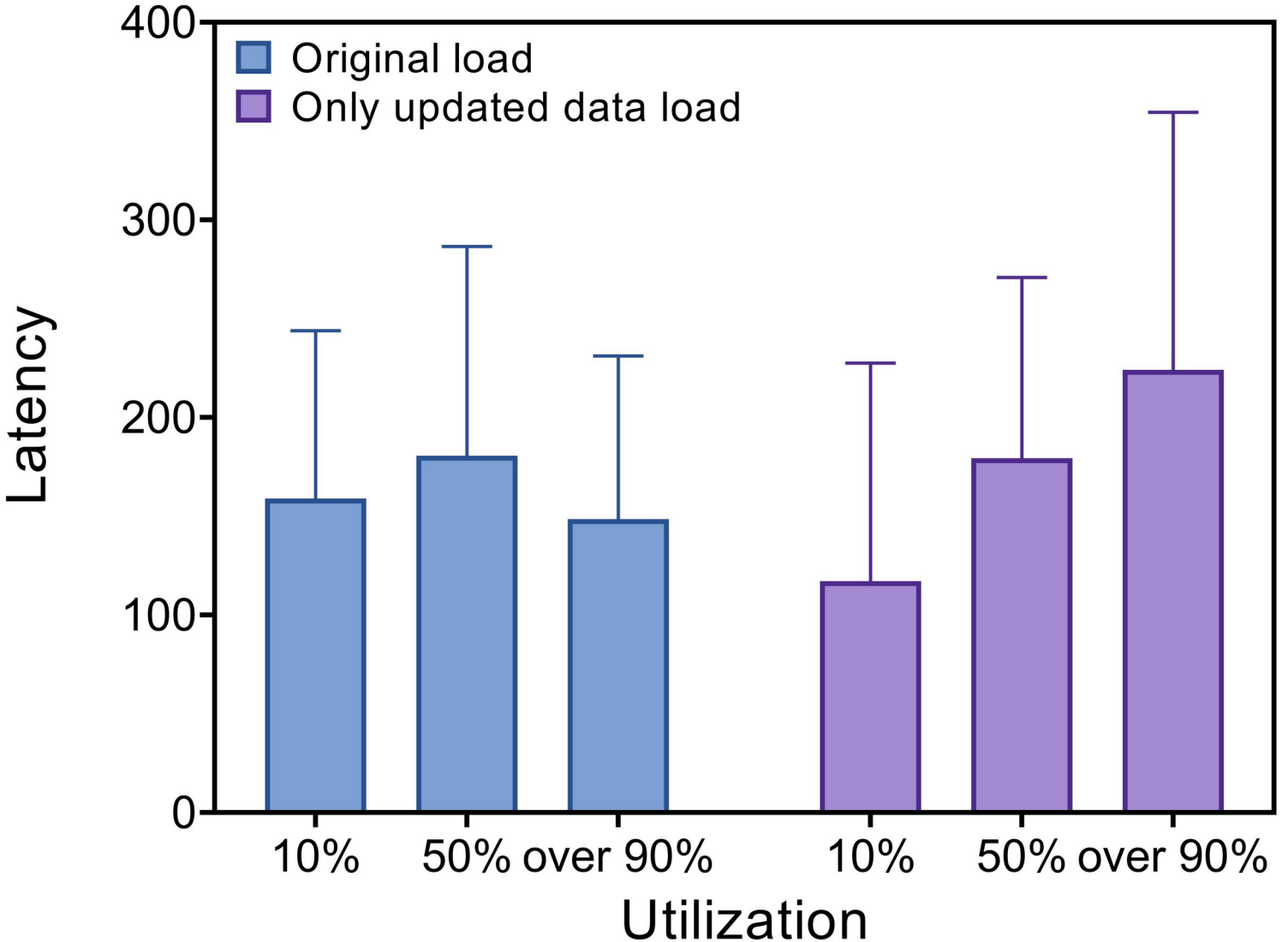

Original State
After Aging Process
File Size
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
1
2
3
4
Count(Log)

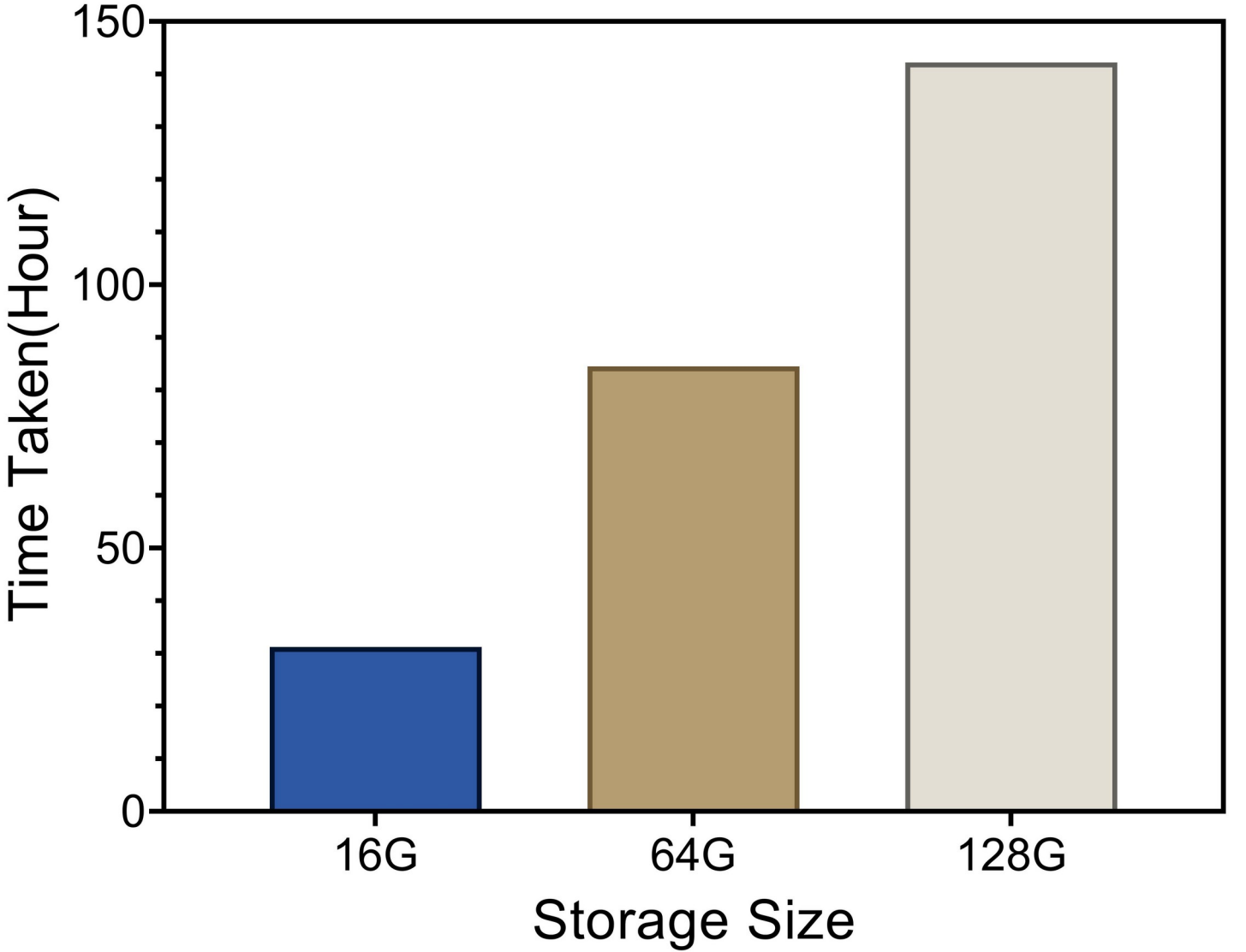

Original State
After Aging Process
File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
20
40
60
80
Percentage

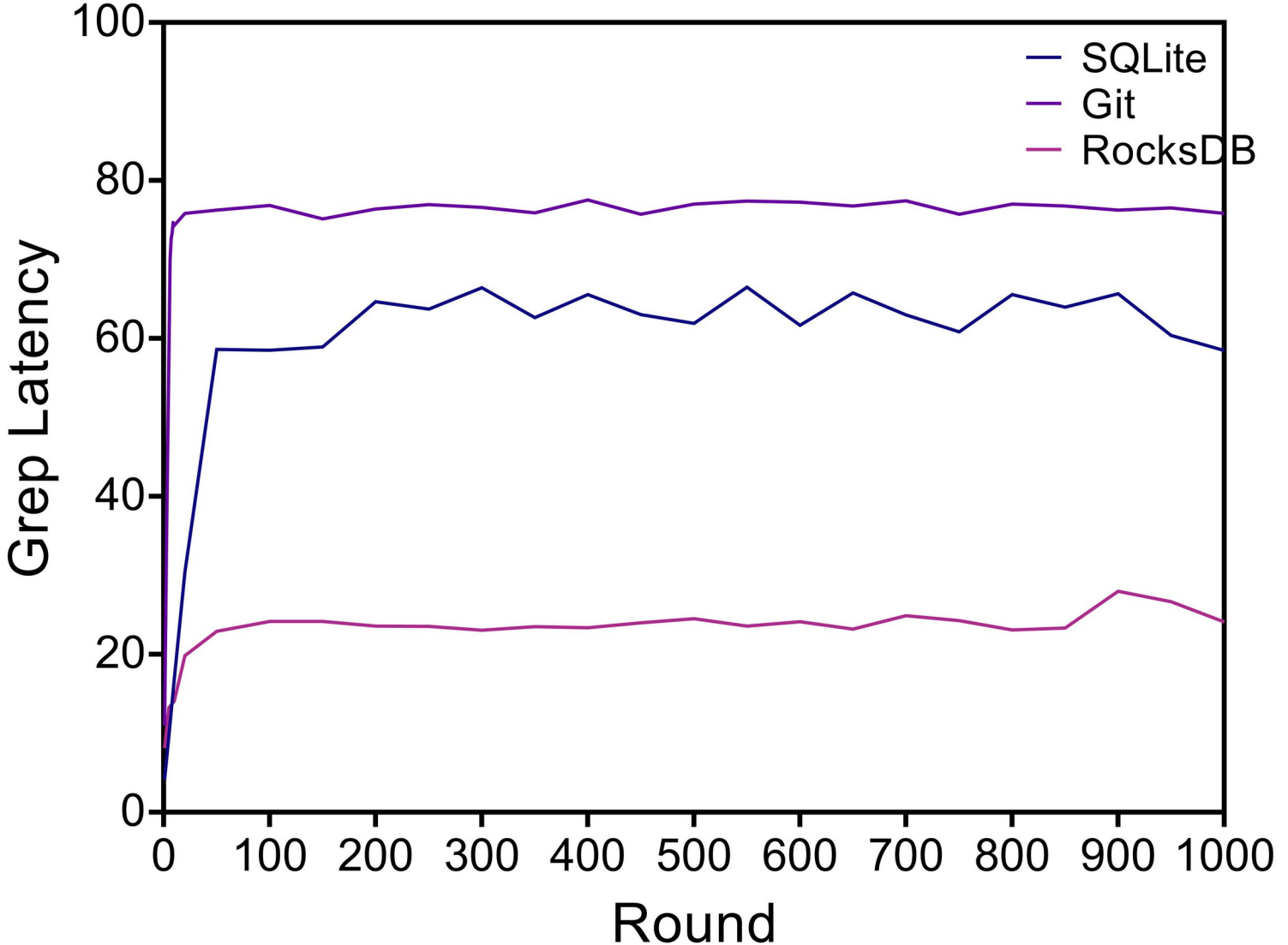

Original State
After Aging Process
File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
1
2
3
Count(Log)

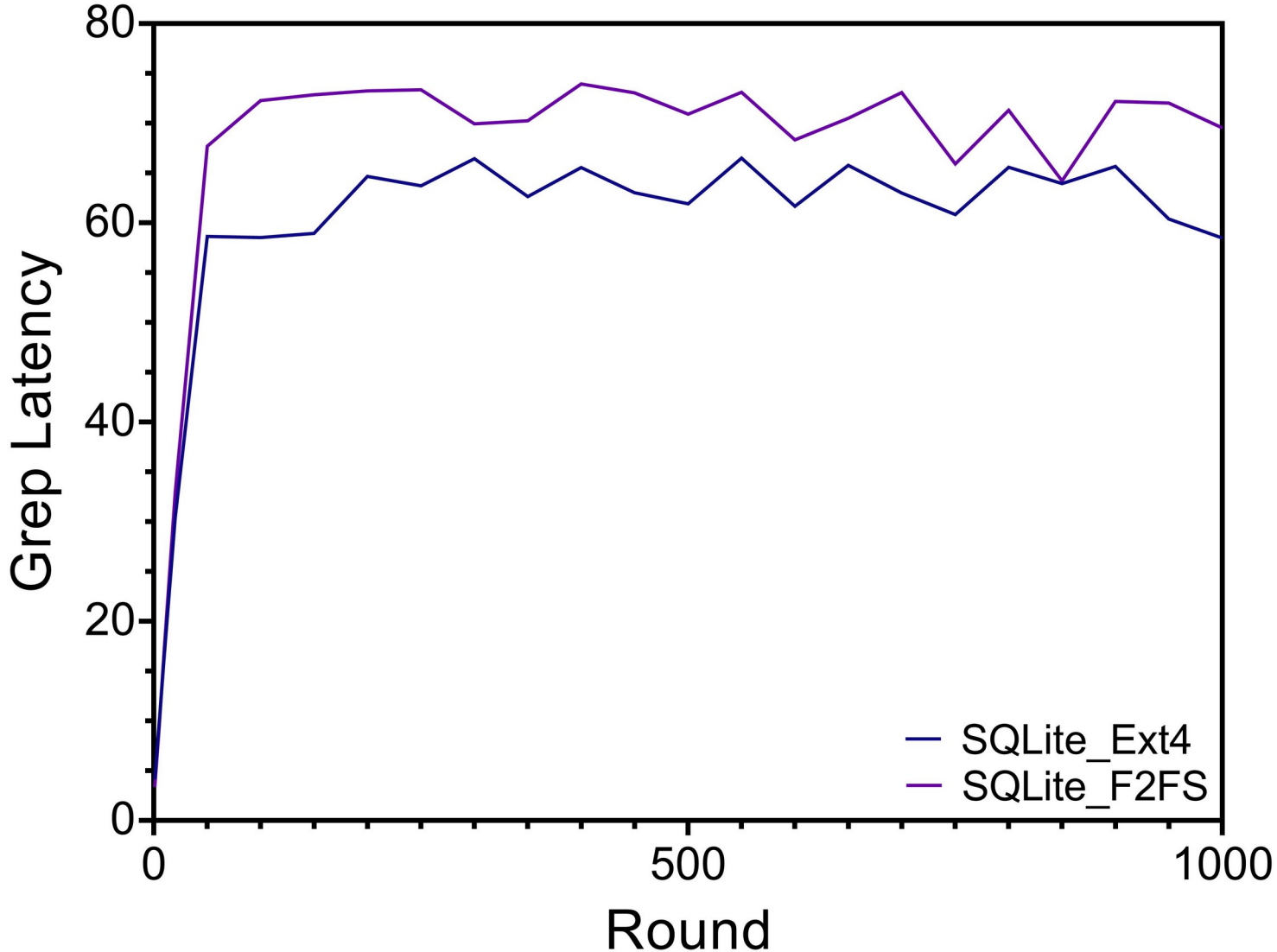

File Size
2G
1G
512M
256M
128M
64M
32M
16M
8M
4M
2M
1M
512K
256K
128K
64K
32K
16K
8K
4K
2K
0
20
40
60
Percentage
Original State
After Aging Process

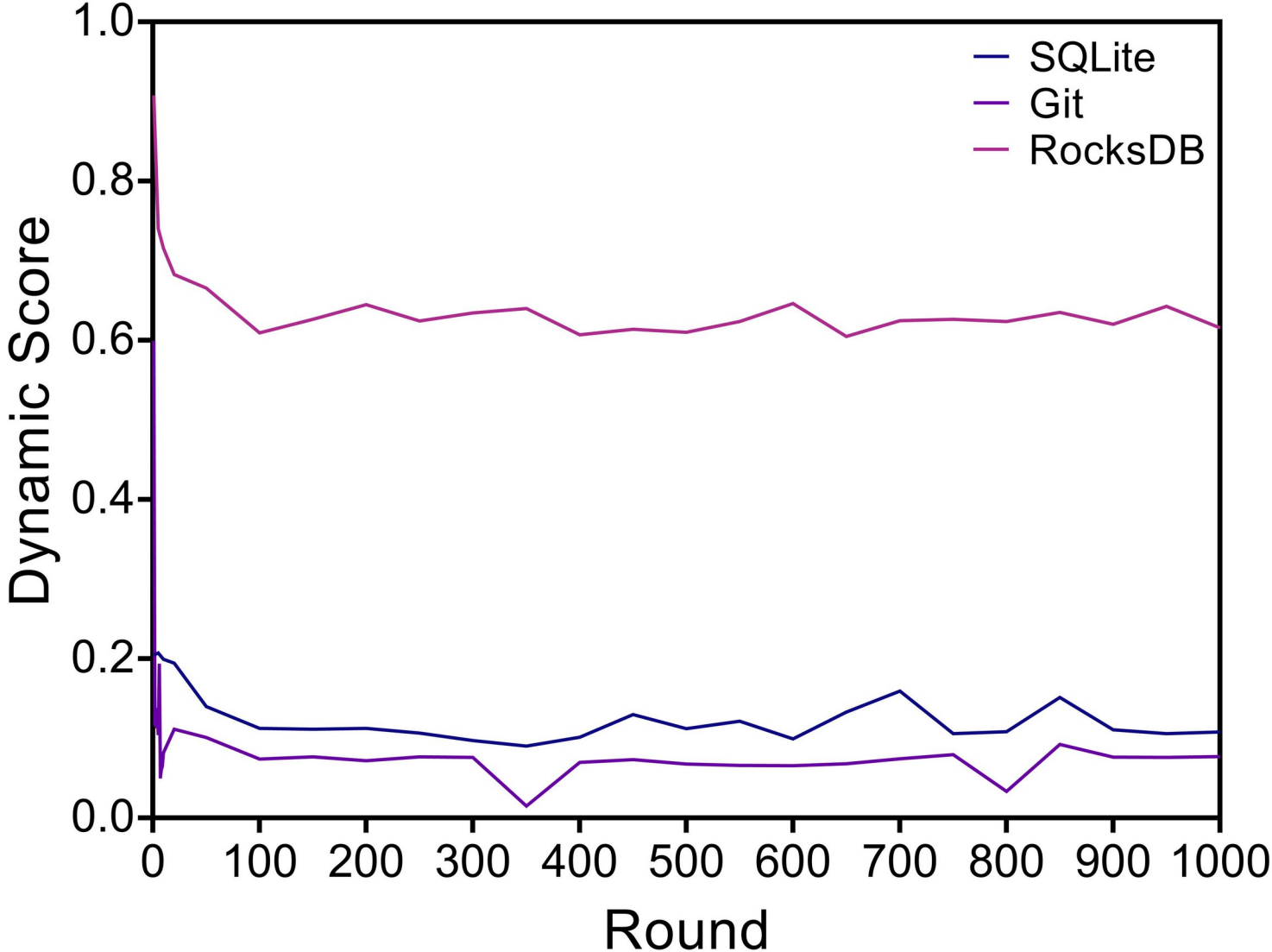

Original save
Only updated data save
Latency
500
400
300
200
100
0
10%
50% over 90%
10%
50% over 90%
Utilization

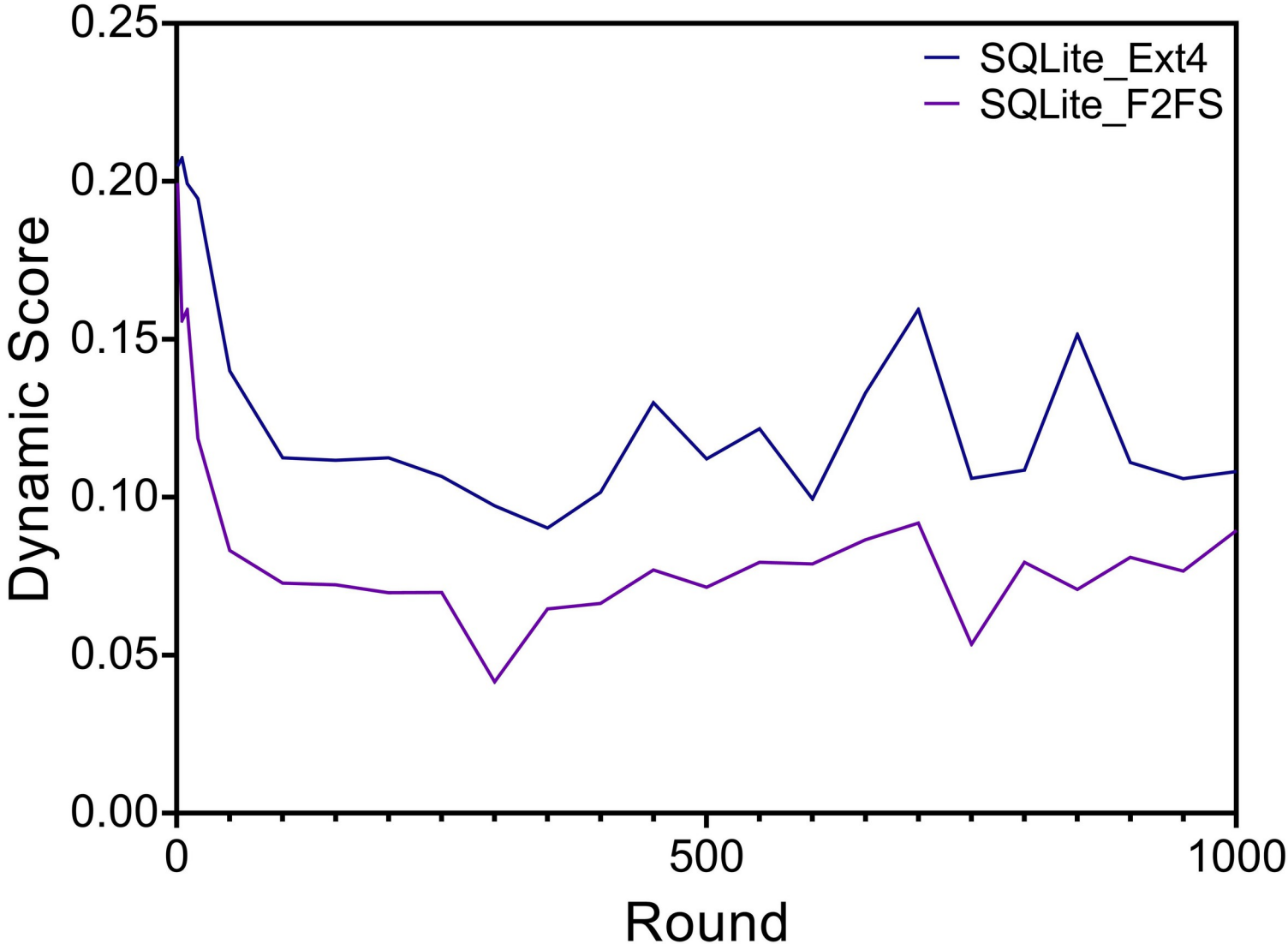

Original load
Only updated data load
Latency
400
300
200
100
0
10%
50%
over 90%
10%
50%
over 90%
Utilization


150
100
50
0
Time Taken(Hour)
16G
64G
128G
Storage Size


SQLite
Git
RocksDB
Grep Latency
Round
0
20
40
60
80
100
0
100
200
300
400
500
600
700
800
900
1000


80
60
40
20
0
Grep Latency
0
500
1000
Round
SQLite_Ext4
SQLite_F2FS


SQLite
Git
RocksDB
Dynamic Score
1.0
0.8
0.6
0.4
0.2
0.0
0
100
200
300
400
500
600
700
800
900
1000
Round


SQLite_Ext4
SQLite_F2FS
Dynamic Score
0.25
0.20
0.15
0.10
0.05
0.00
0
500
1000
Round