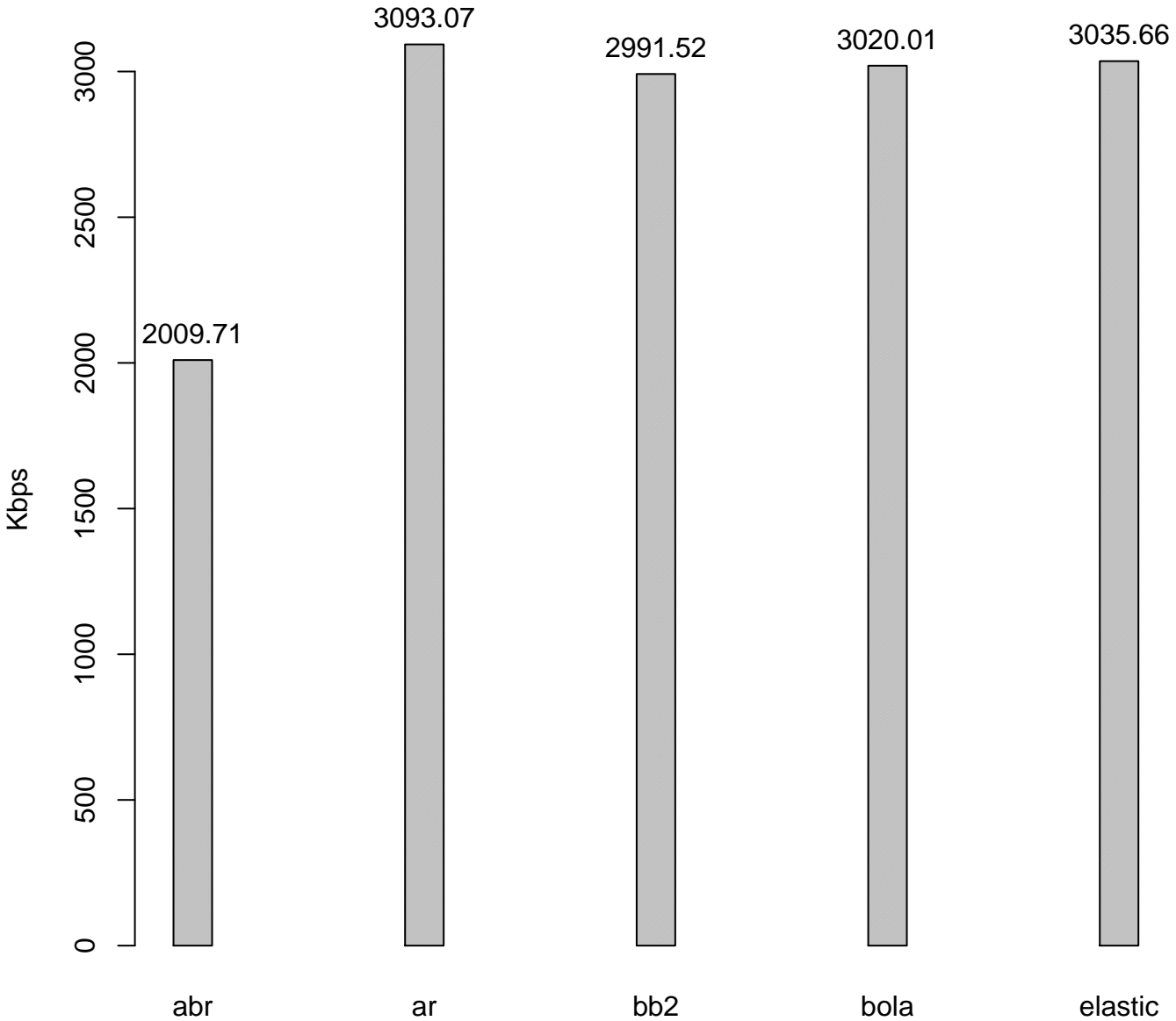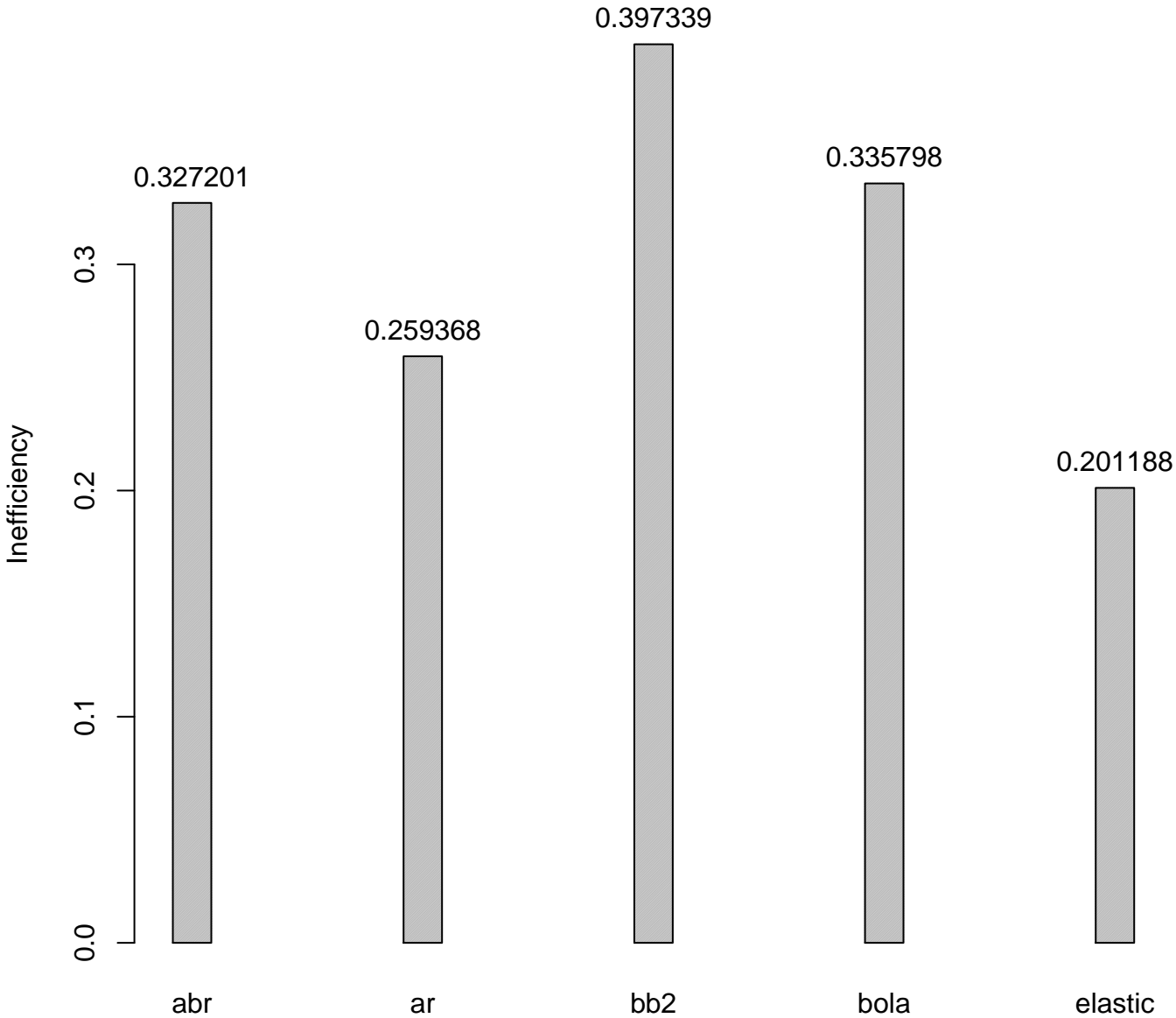**Network profile: p1 Sample: t1 Metric: Avg−Bitrate**
Buffer: 120 max: ar

Network profile: p1 Sample: t1 Metric: Inefficiency
Buffer: 120 min: elastic

Network profile: p1 Sample: t1 Metric: # quality change
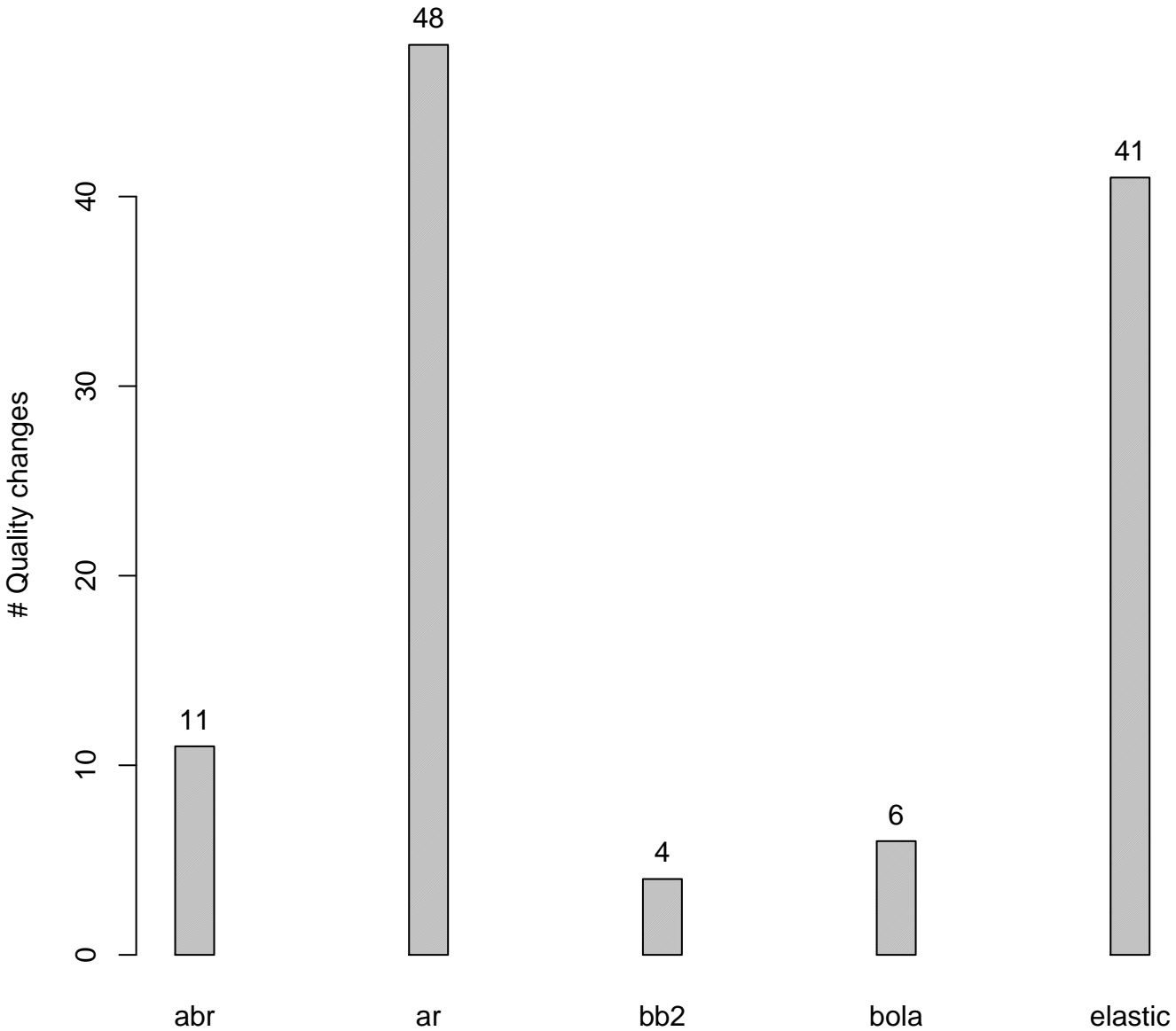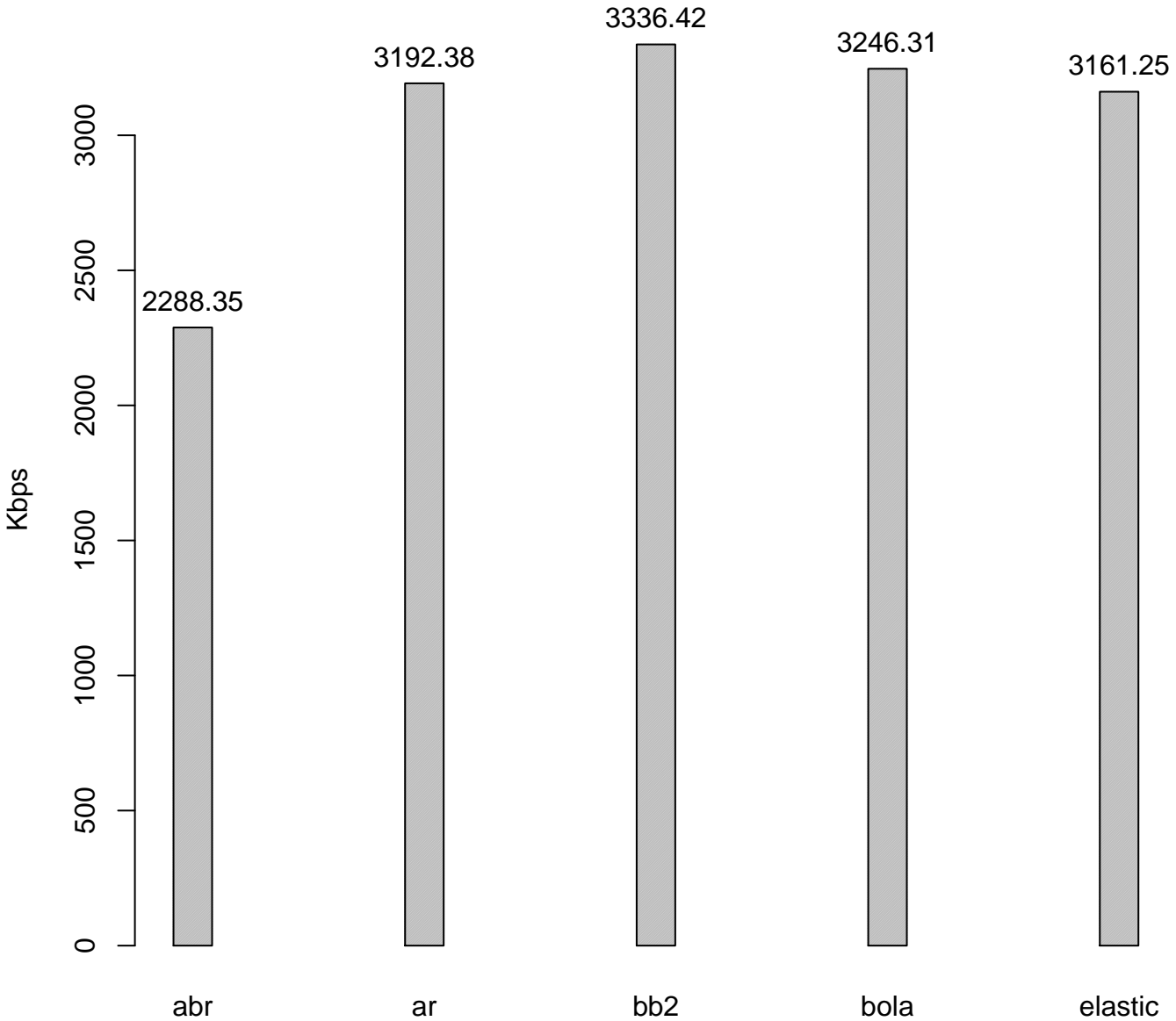**Buffer: 120 min: bb2**

Network profile: p1 Sample: t2 Metric: Avg−Bitrate
Buffer: 120 max: bb2

Network profile: p1 Sample: t2 Metric: Inefficiency
Buffer: 120 min: elastic

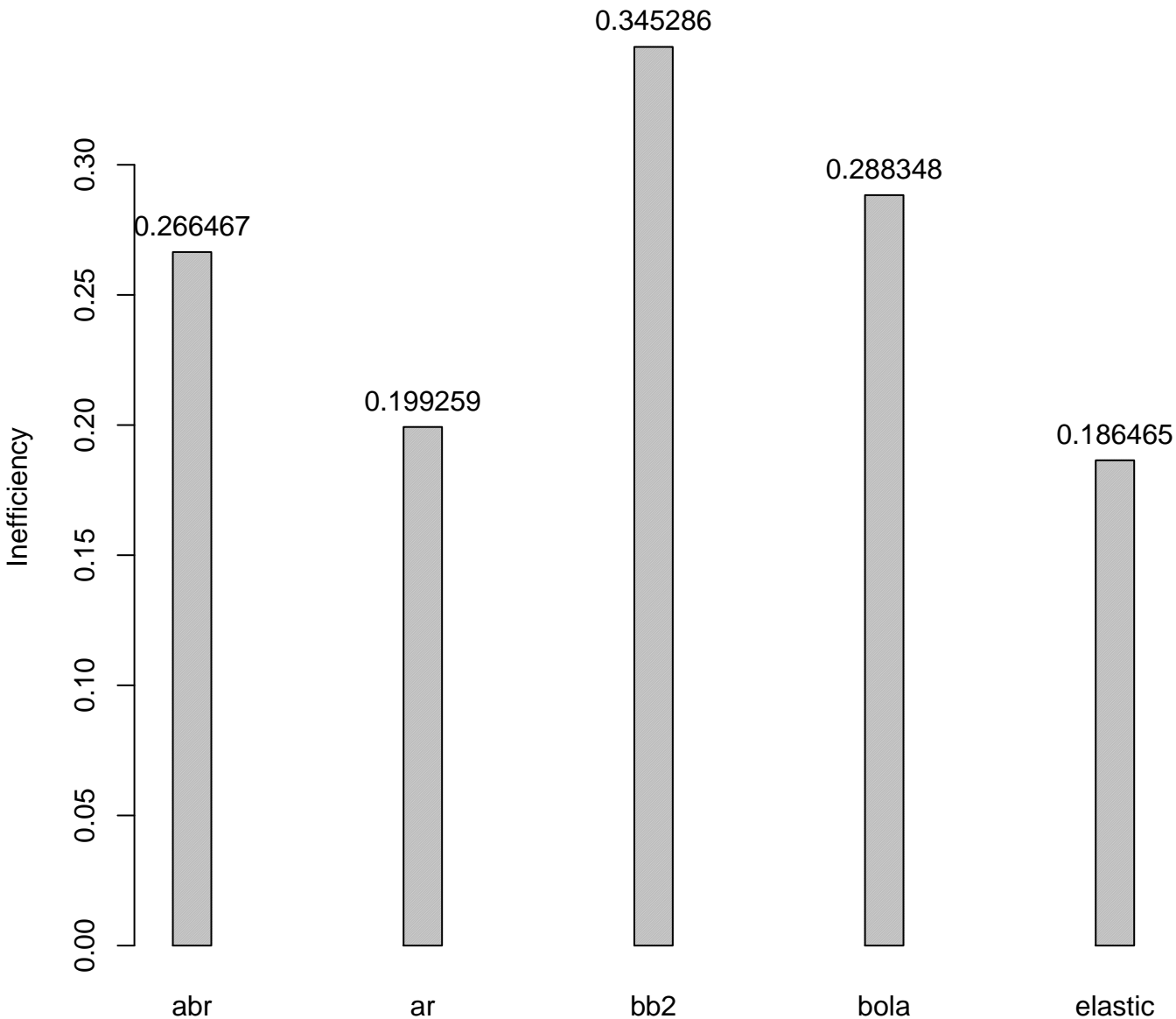**Network profile: p1 Sample: t2 Metric: # quality change Buffer: 120 min: bb2**

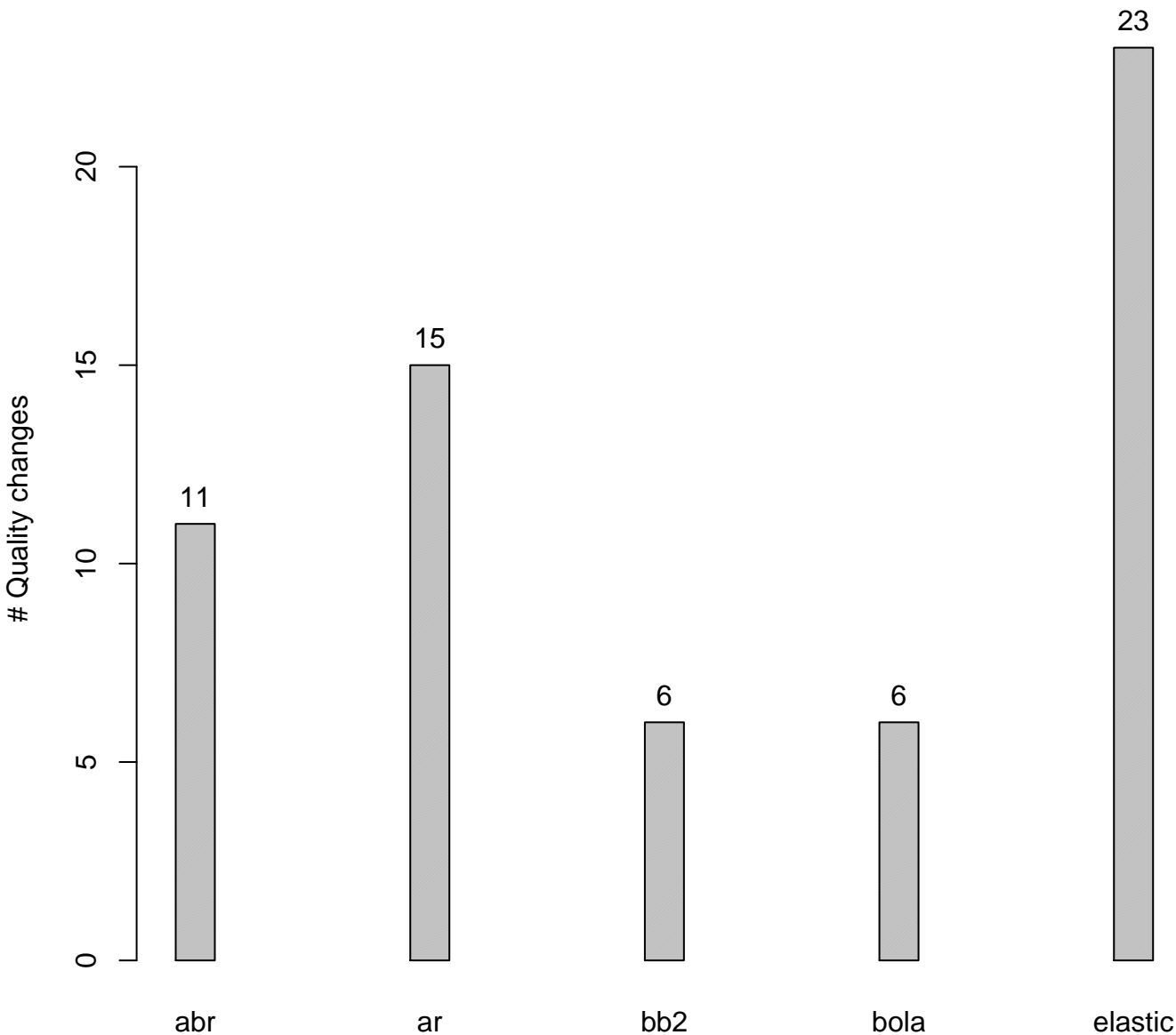**Network profile: p1 Sample: t3 Metric: Avg−Bitrate**
Buffer: 120 max: bb2

Network profile: p1 Sample: t3 Metric: Inefficiency
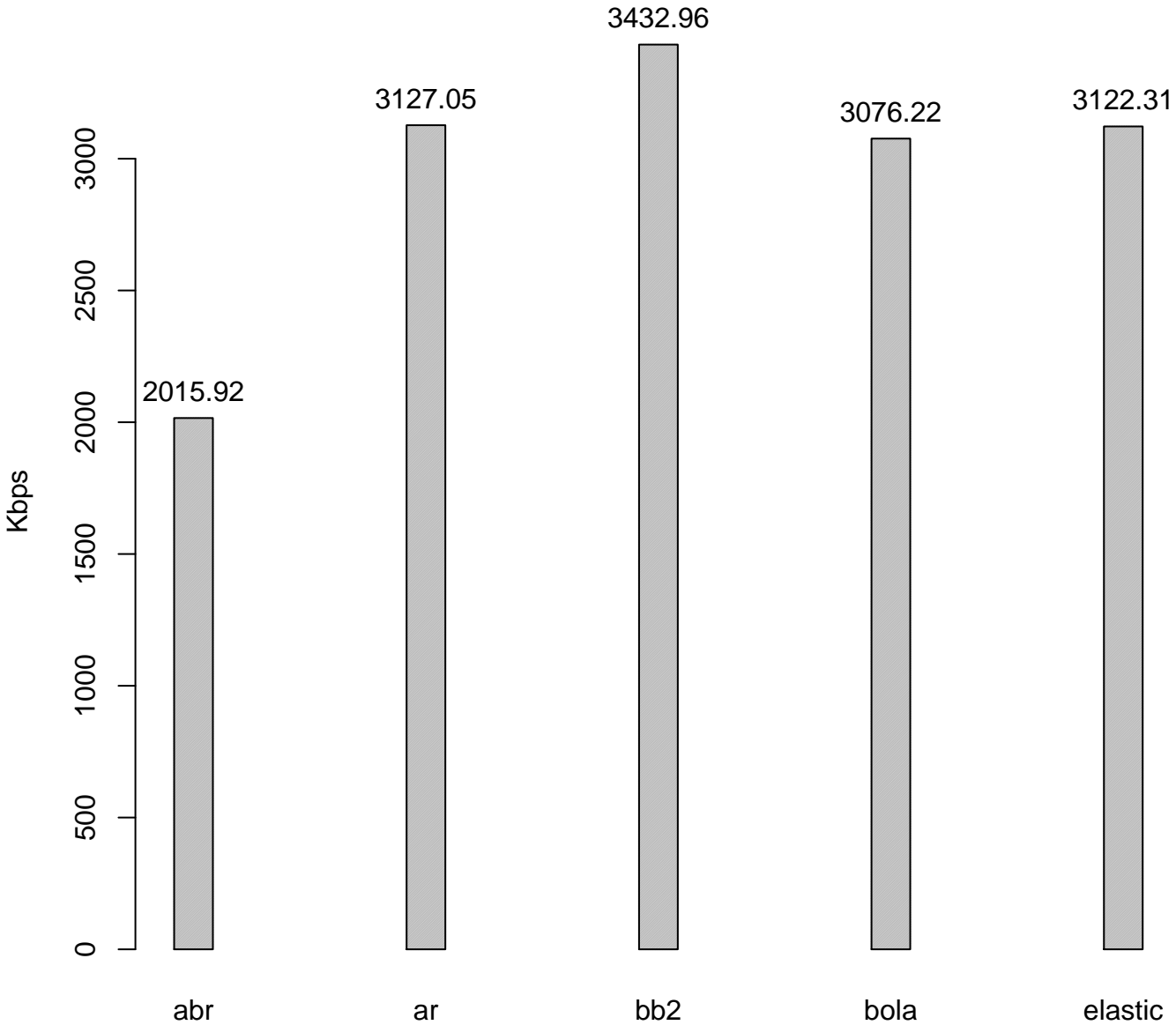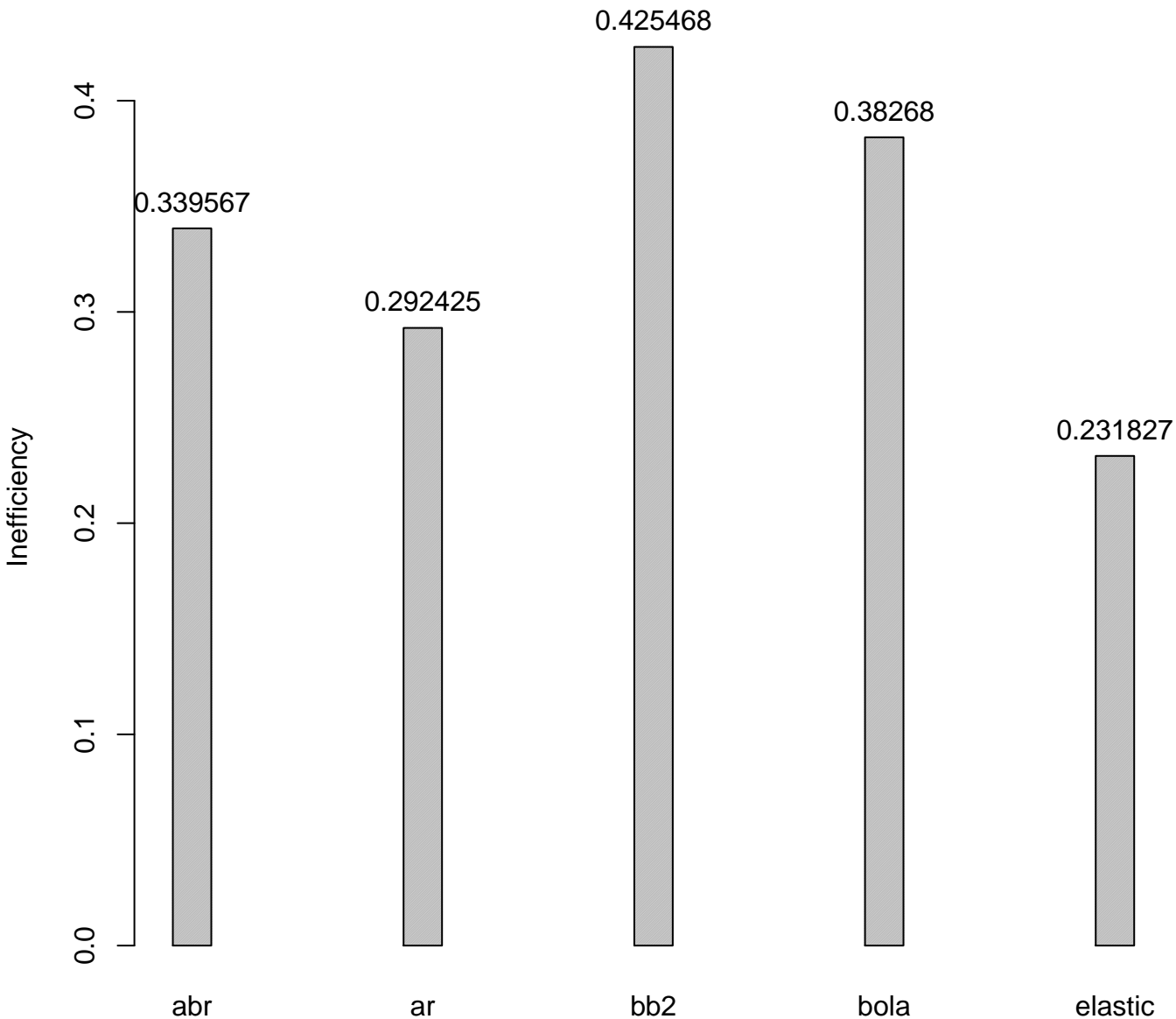**Buffer: 120 min: elastic**

Network profile: p1 Sample: t3 Metric: # quality change
Buffer: 120 min: bb2

Network profile: p1 Sample: t4 Metric: Avg−Bitrate
Buffer: 120 max: bb2

Kbps

3352.52   3411.09   3360.63

2601.9

1798.6

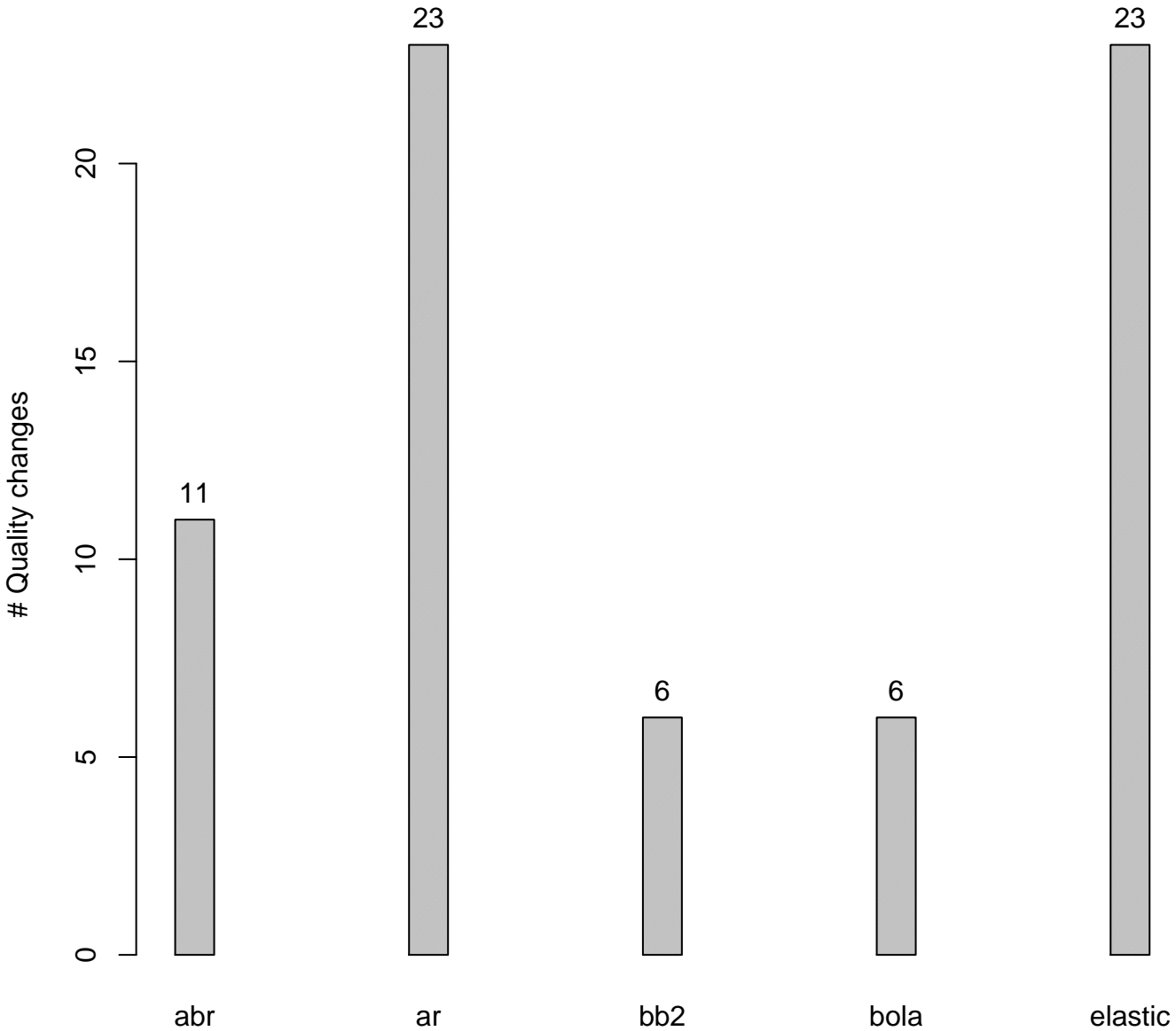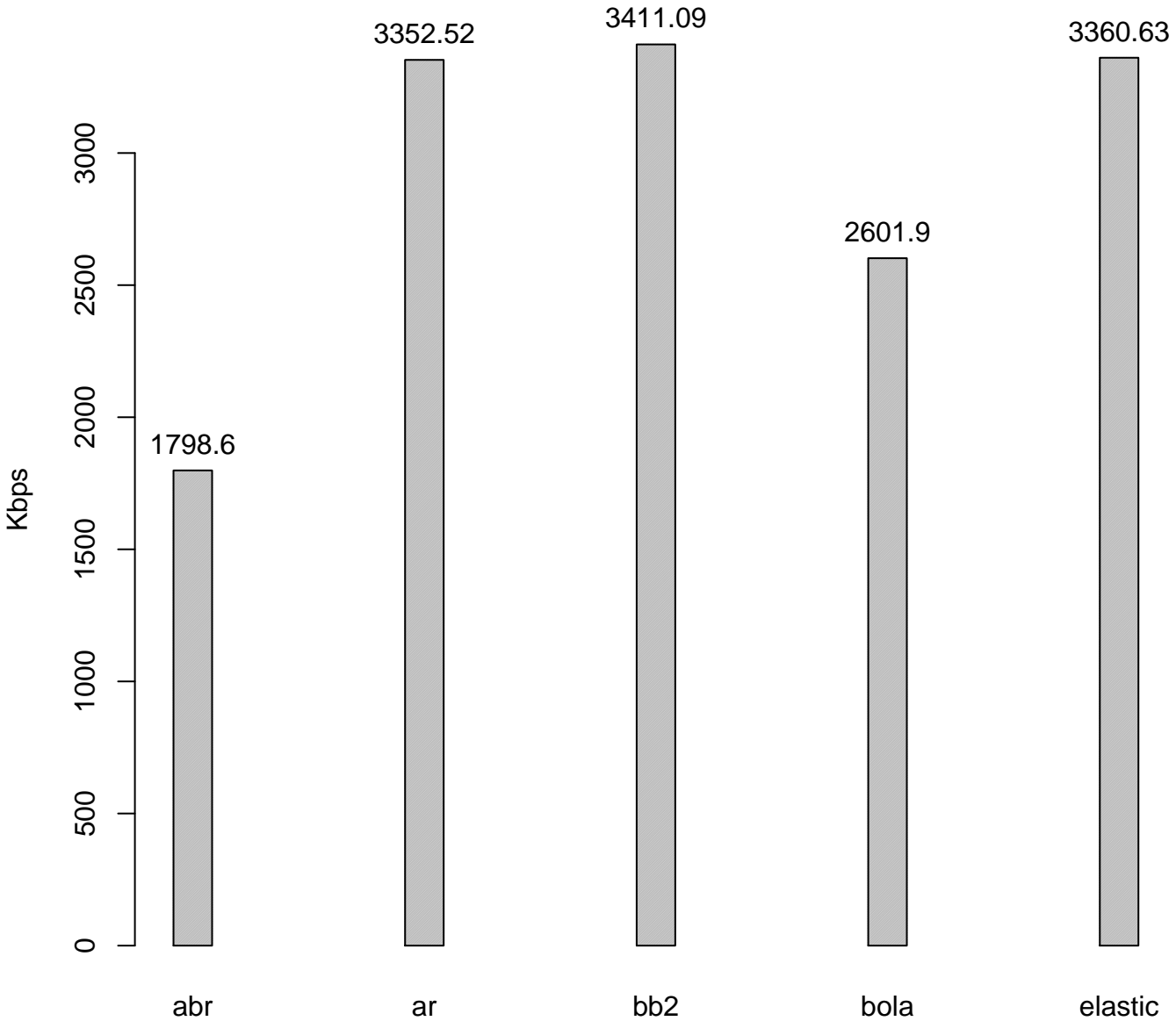abr   ar   bb2   bola   elastic

Network profile: p1 Sample: t4 Metric: Inefficiency
Buffer: 120 min: elastic

Network profile: p1 Sample: t4 Metric: # quality change
Buffer: 120 min: bola
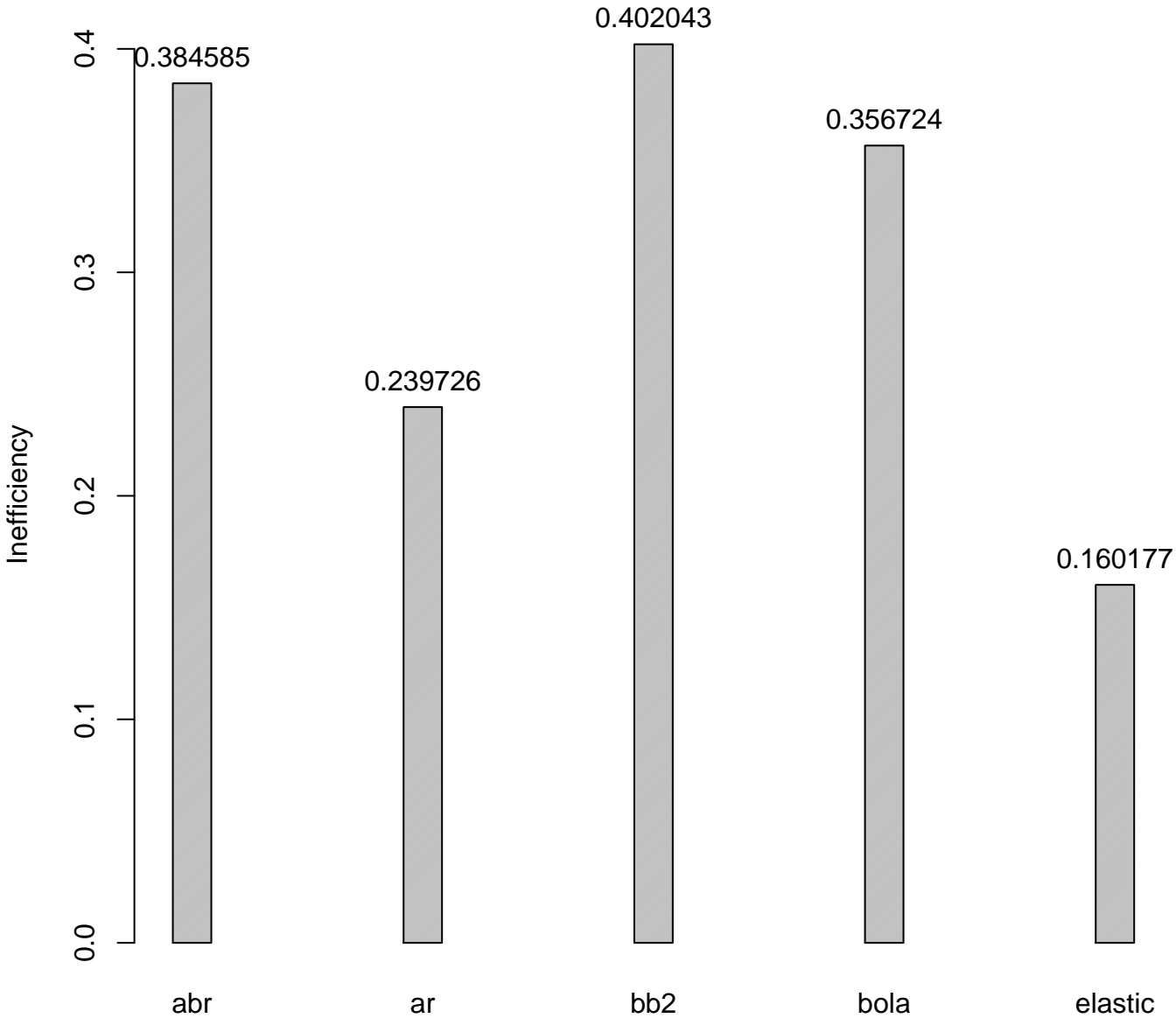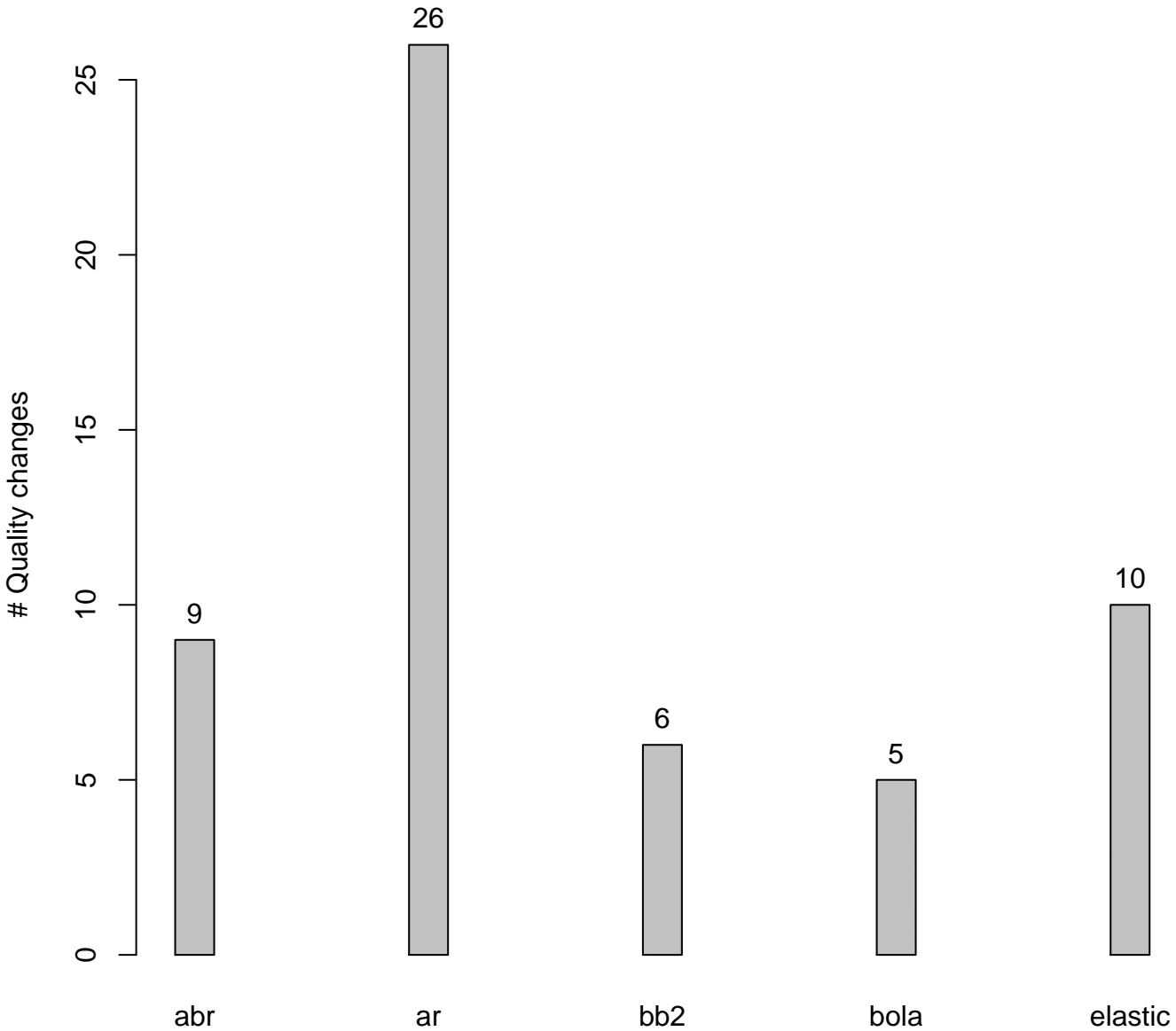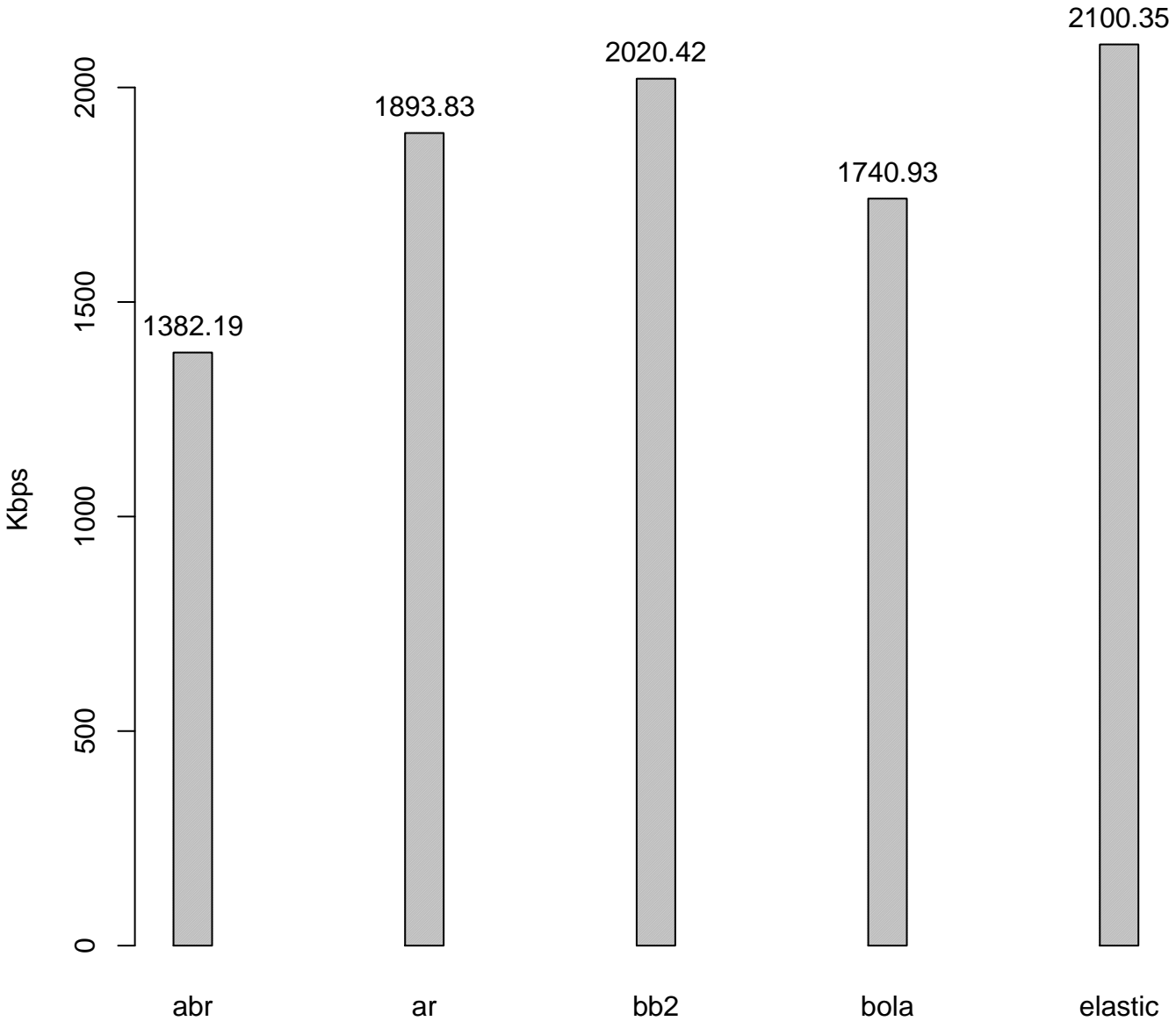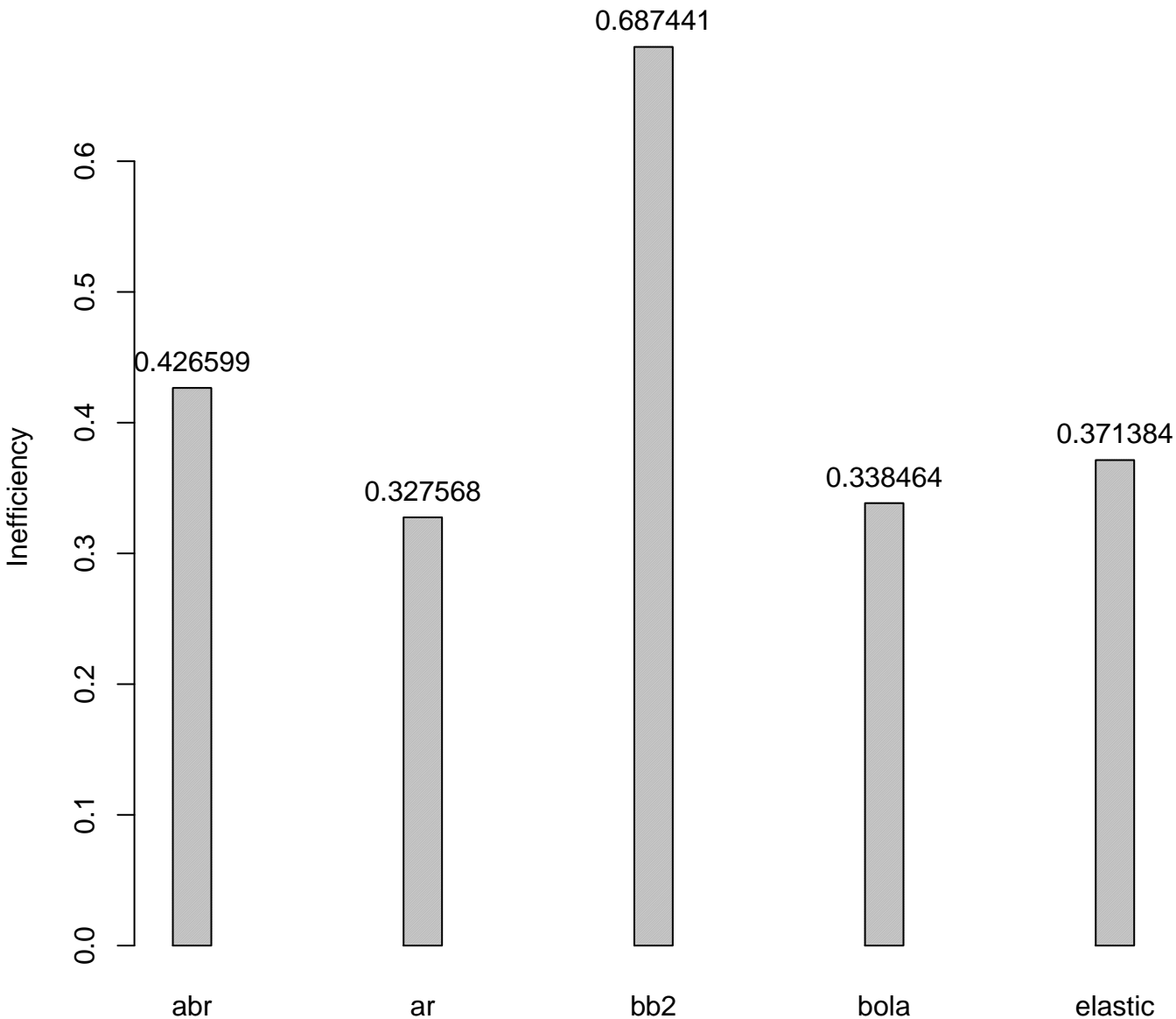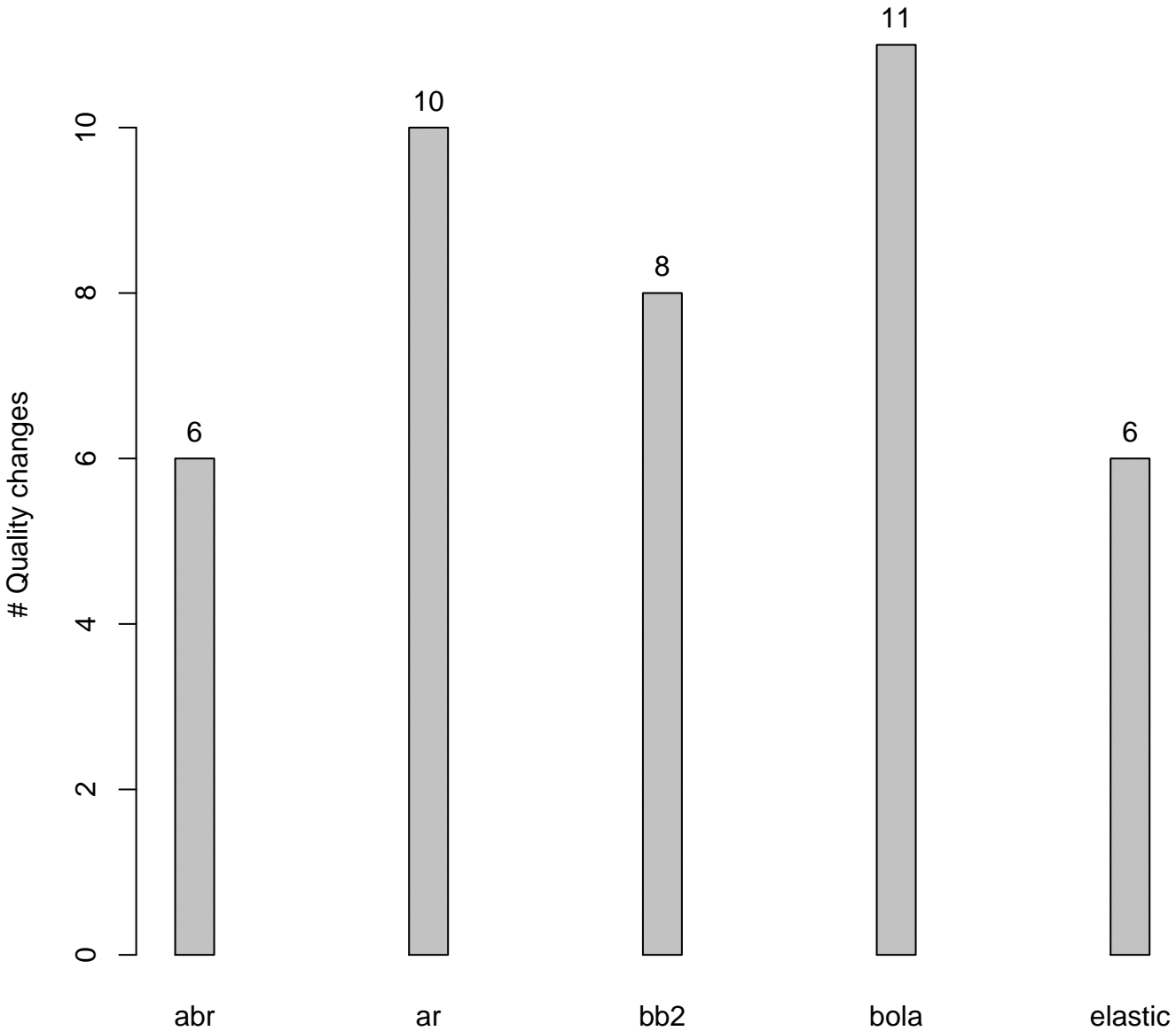
Network profile: p1 Sample: t5 Metric: Avg−Bitrate
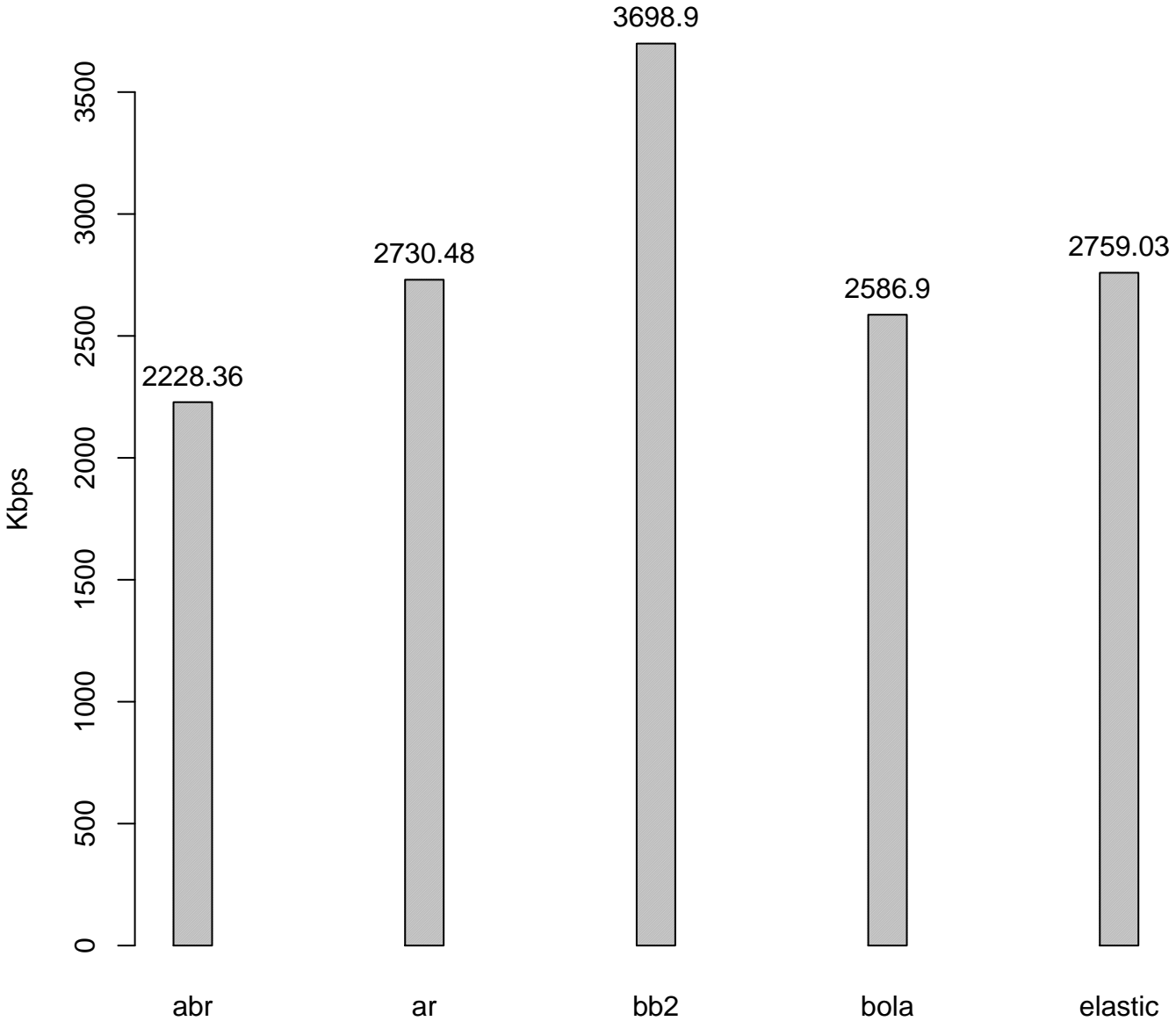**Buffer: 120 max: elastic**

Network profile: p1 Sample: t5 Metric: Inefficiency
Buffer: 120 min: ar

**Network profile: p1 Sample: t5 Metric: # quality change
Buffer: 120 min: abr**

Network profile: p1 Sample: t6 Metric: Avg−Bitrate
Buffer: 120 max: bb2

Kbps

| abr | ar | bb2 | bola | elastic |

2228.36, 2730.48, 3698.9, 2586.9, 2759.03

Network profile: p1 Sample: t6 Metric: Inefficiency
Buffer: 120 min: elastic

Network profile: p1 Sample: t6 Metric: # quality change
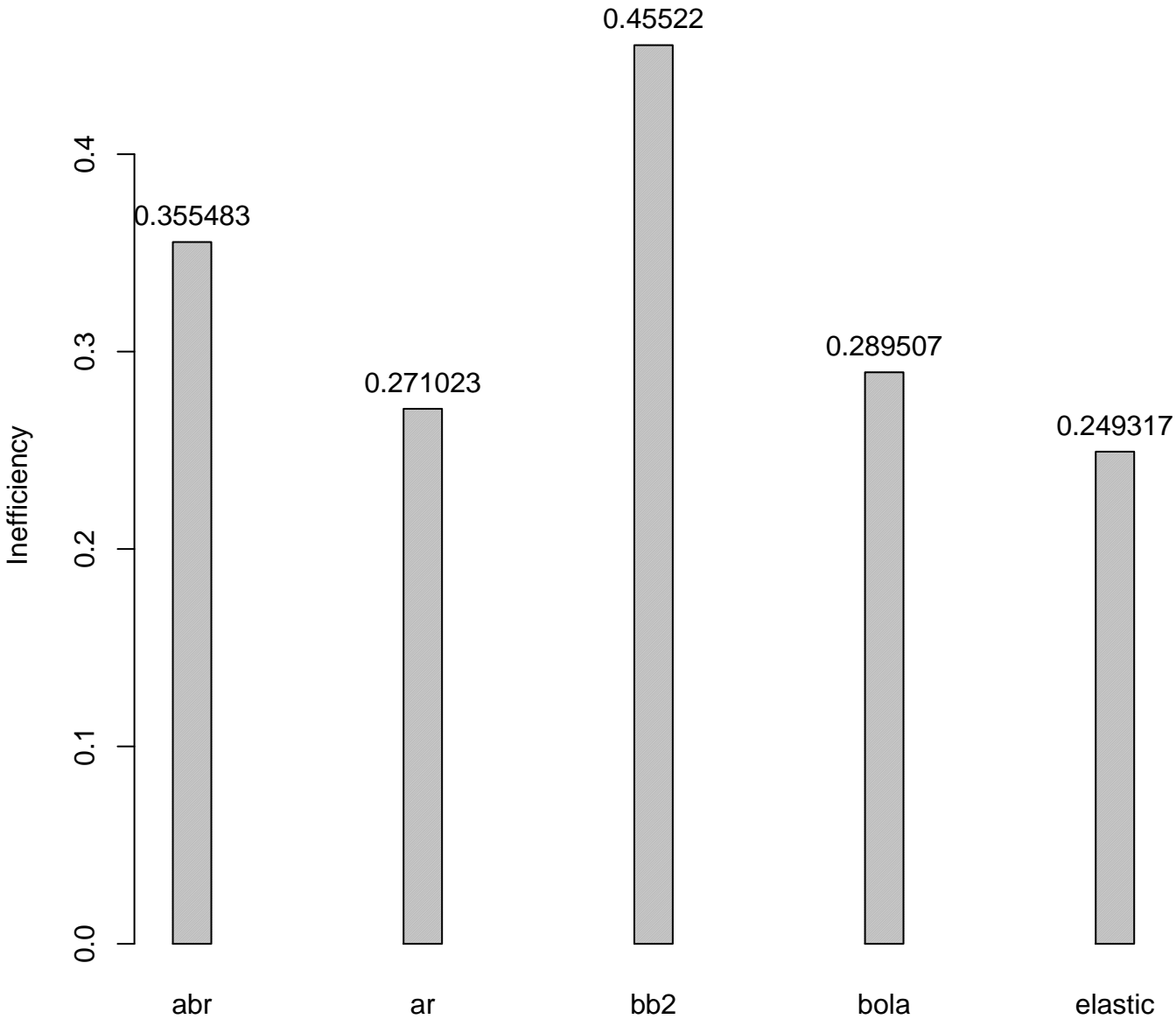**Buffer: 120 min: bola**

Network profile: p1 Sample: t7 Metric: Avg−Bitrate
Buffer: 120 max: bb2

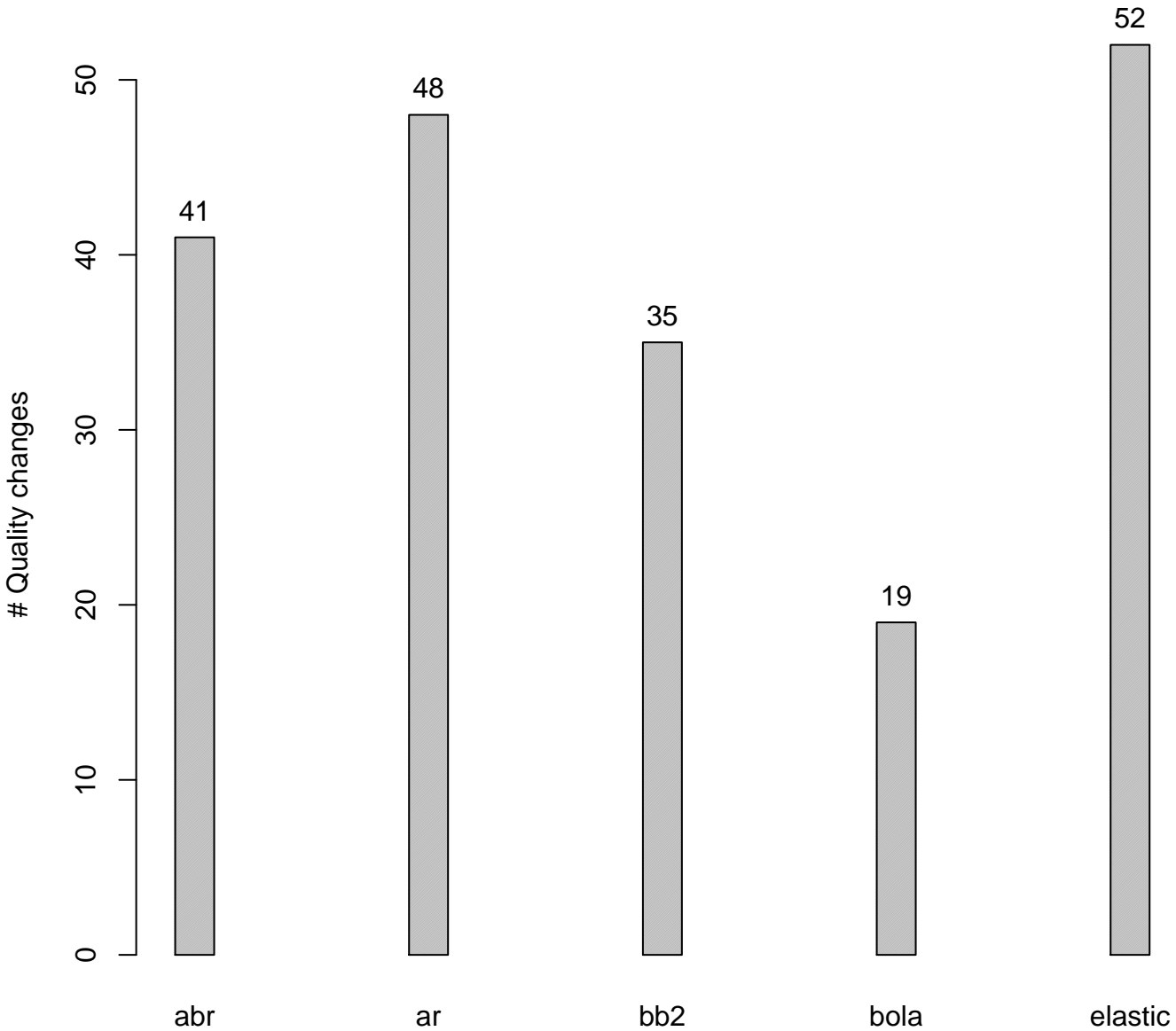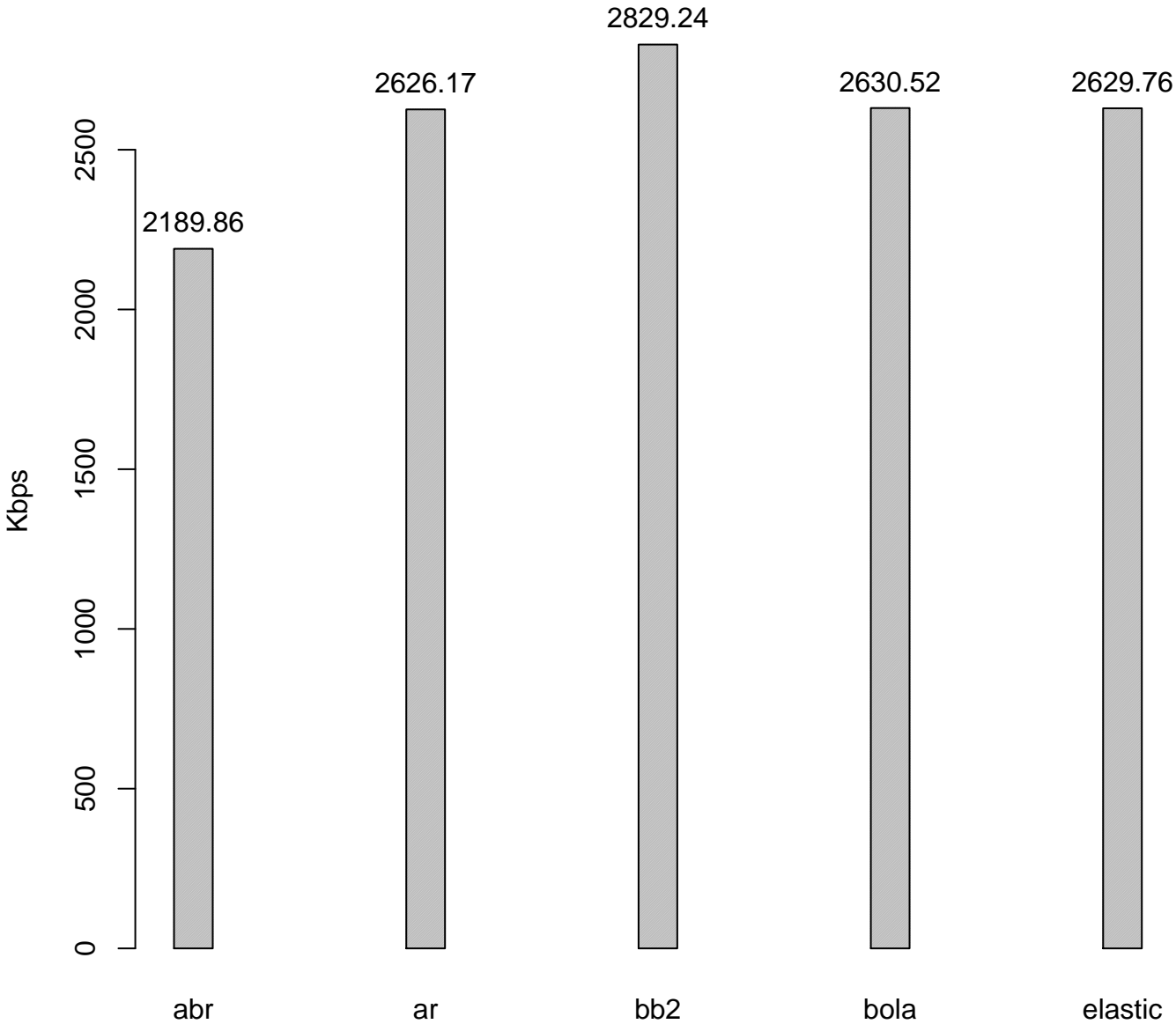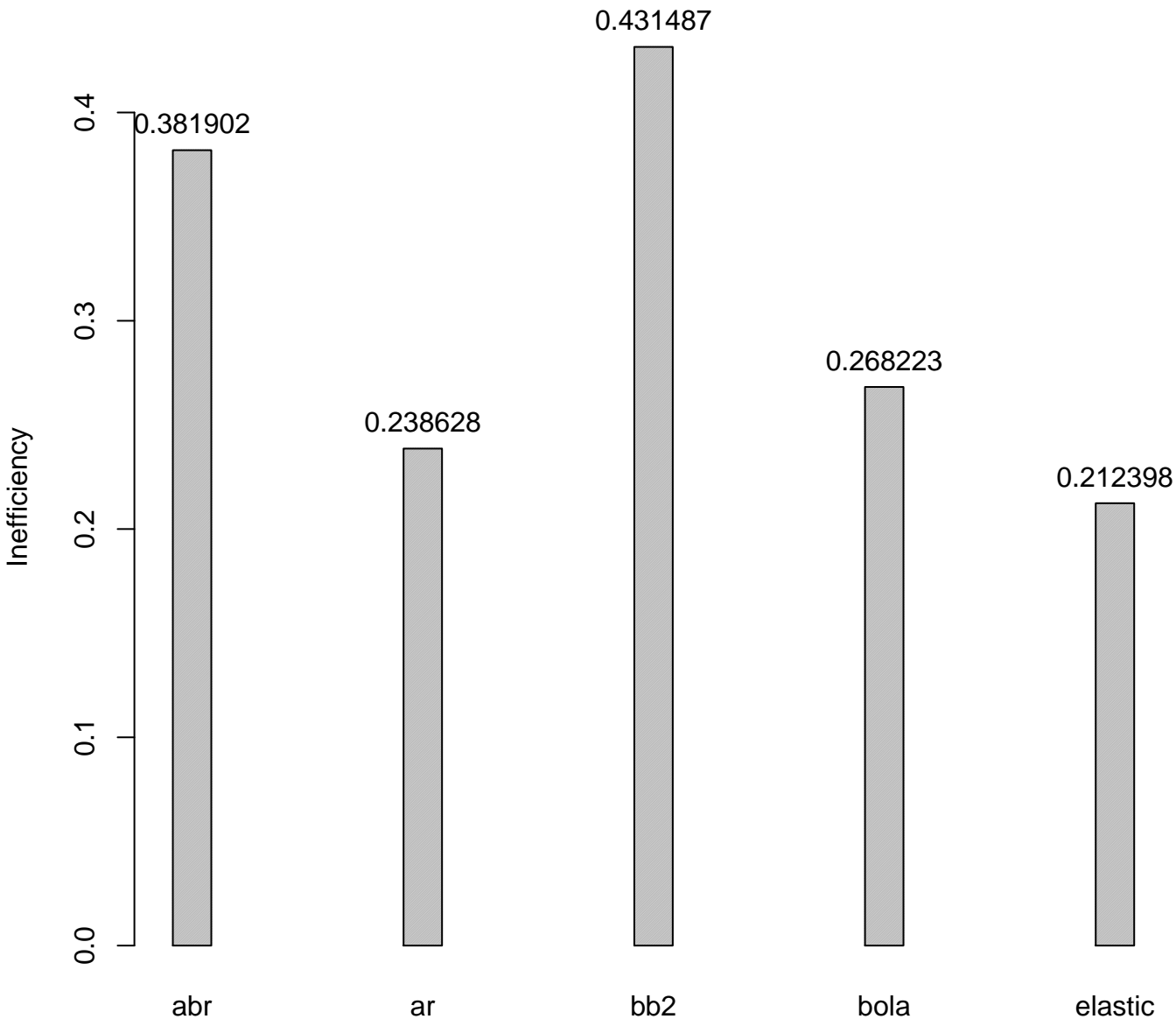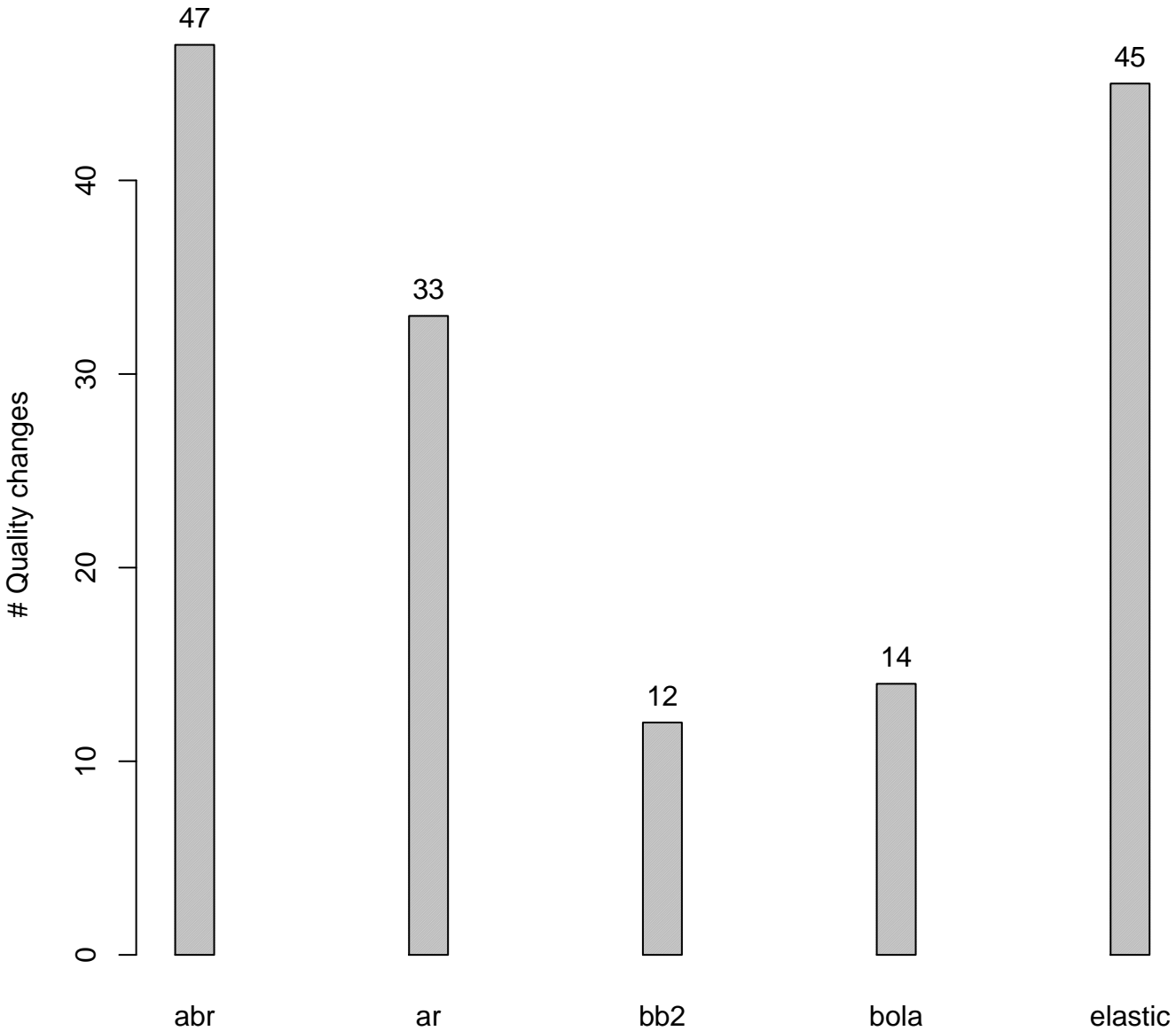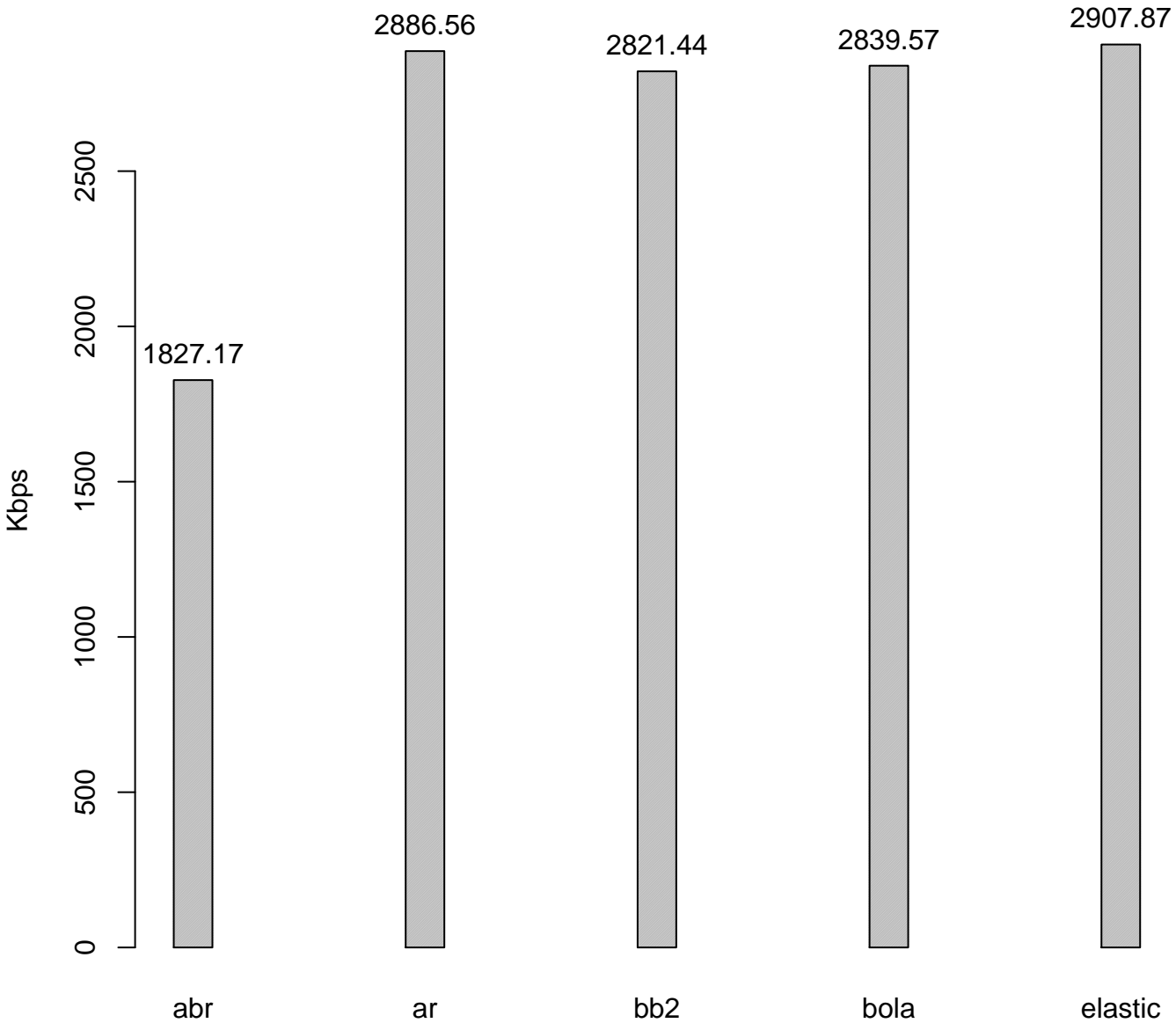**Network profile: p1 Sample: t7 Metric: Inefficiency**
Buffer: 120 min: elastic

Network profile: p1 Sample: t7 Metric: # quality change Buffer: 120 min: bb2

Network profile: p2 Sample: t1 Metric: Avg−Bitrate
Buffer: 120 max: elastic

Network profile: p2 Sample: t1 Metric: Inefficiency
Buffer: 120 min: elastic

**Network profile: p2 Sample: t1 Metric: # quality change
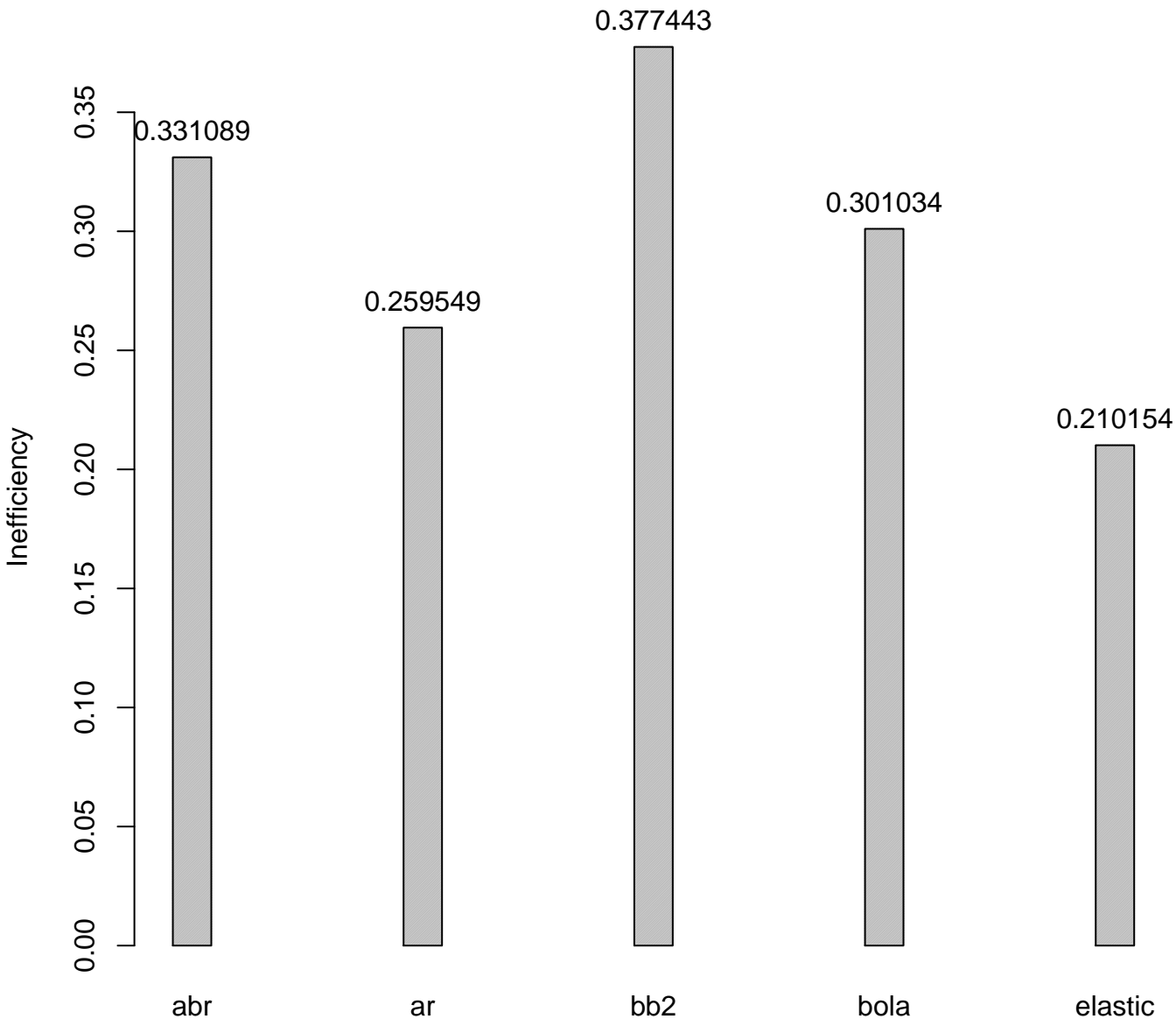Buffer: 120 min: bb2**

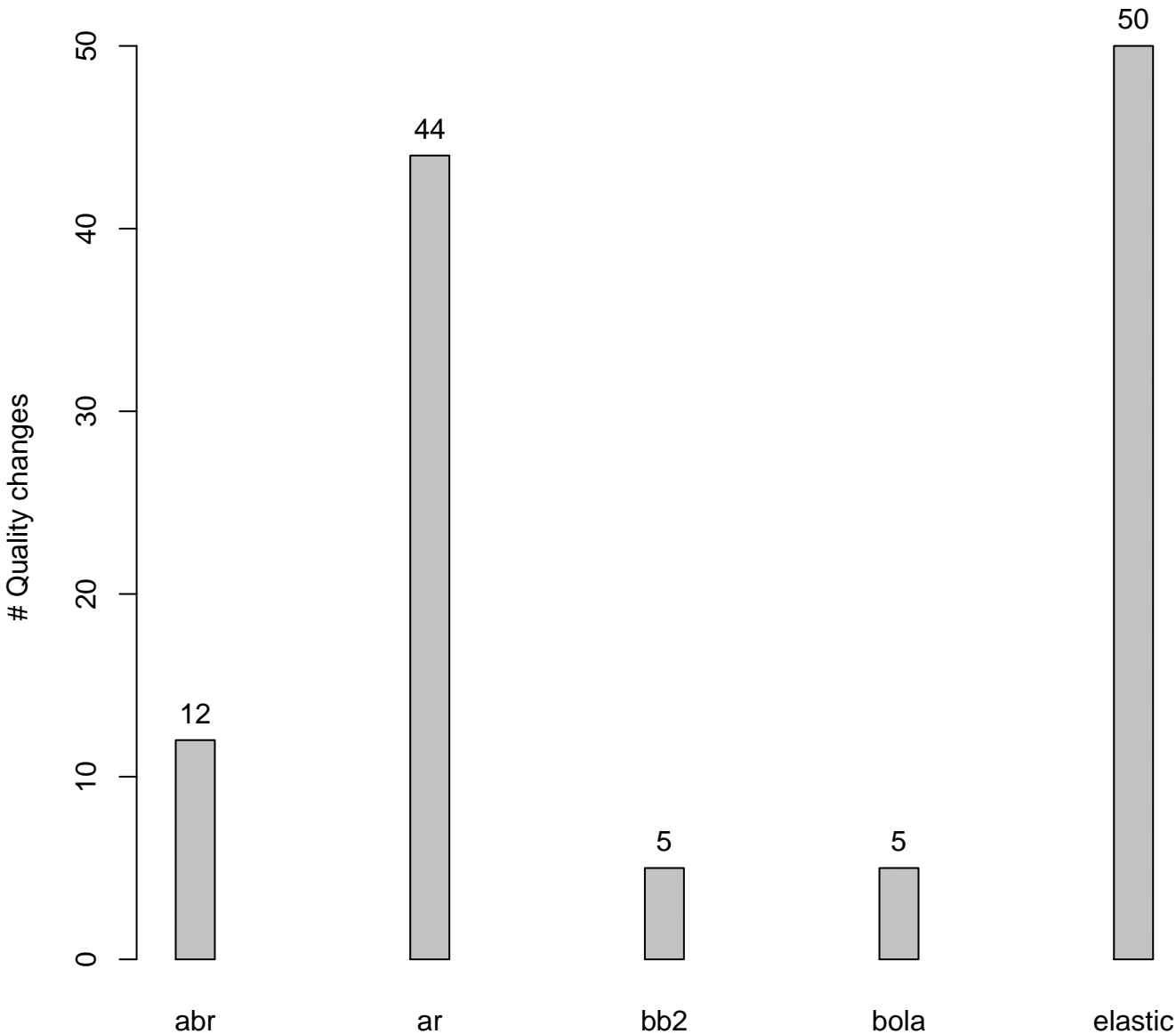**Network profile: p2 Sample: t2 Metric: Avg−Bitrate**
Buffer: 120 max: elastic

Network profile: p2 Sample: t2 Metric: Inefficiency
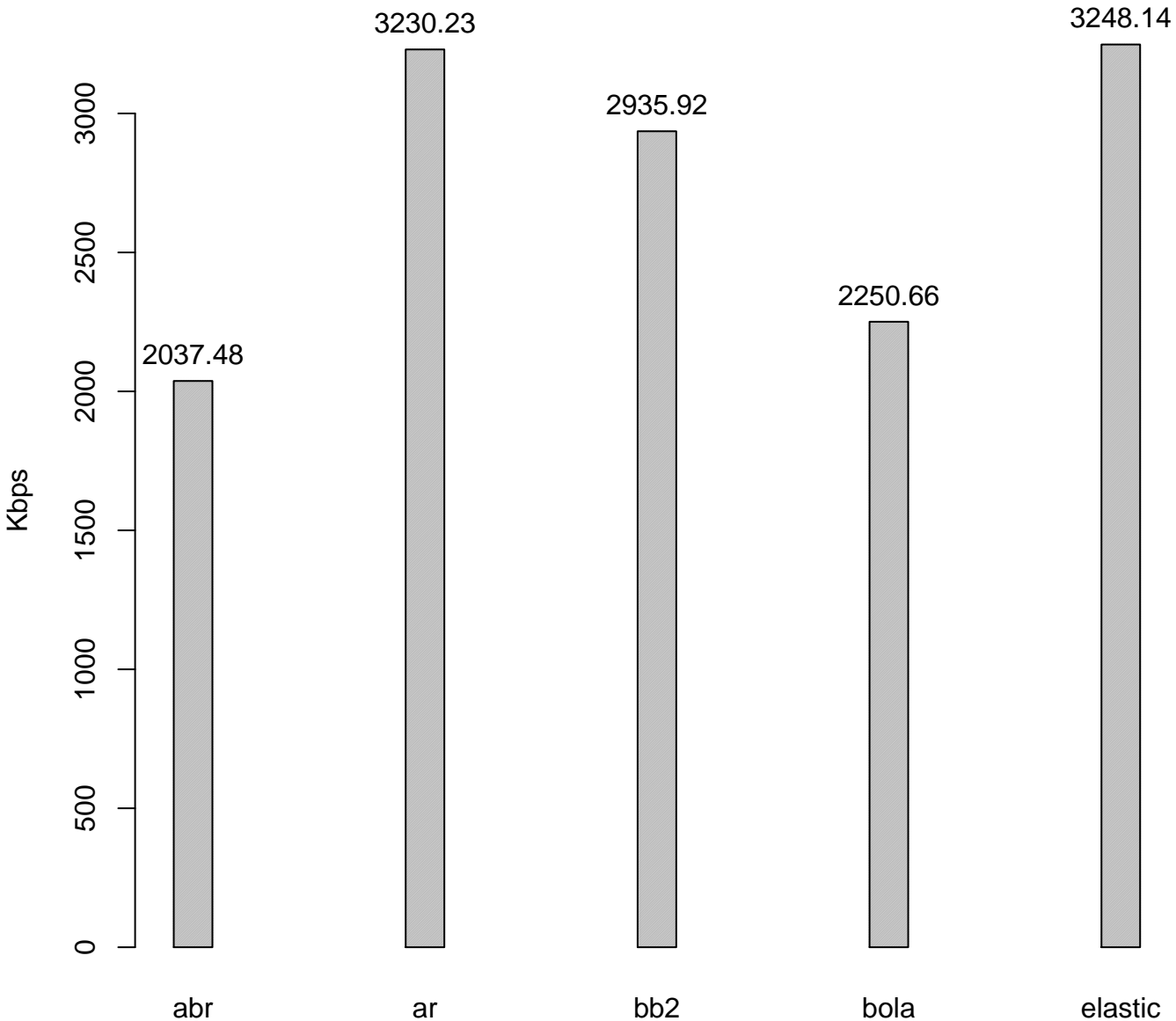**Buffer: 120 min: elastic**

**Network profile: p2 Sample: t2 Metric: # quality change
Buffer: 120 min: bola**

Quality changes

22

16

10

5

1

abr   ar   bb2   bola   elastic

Network profile: p2 Sample: t3 Metric: Avg−Bitrate
Buffer: 120 max: bb2

Network profile: p2 Sample: t3 Metric: Inefficiency Buffer: 120 min: elastic

**Network profile: p2 Sample: t3 Metric: # quality change
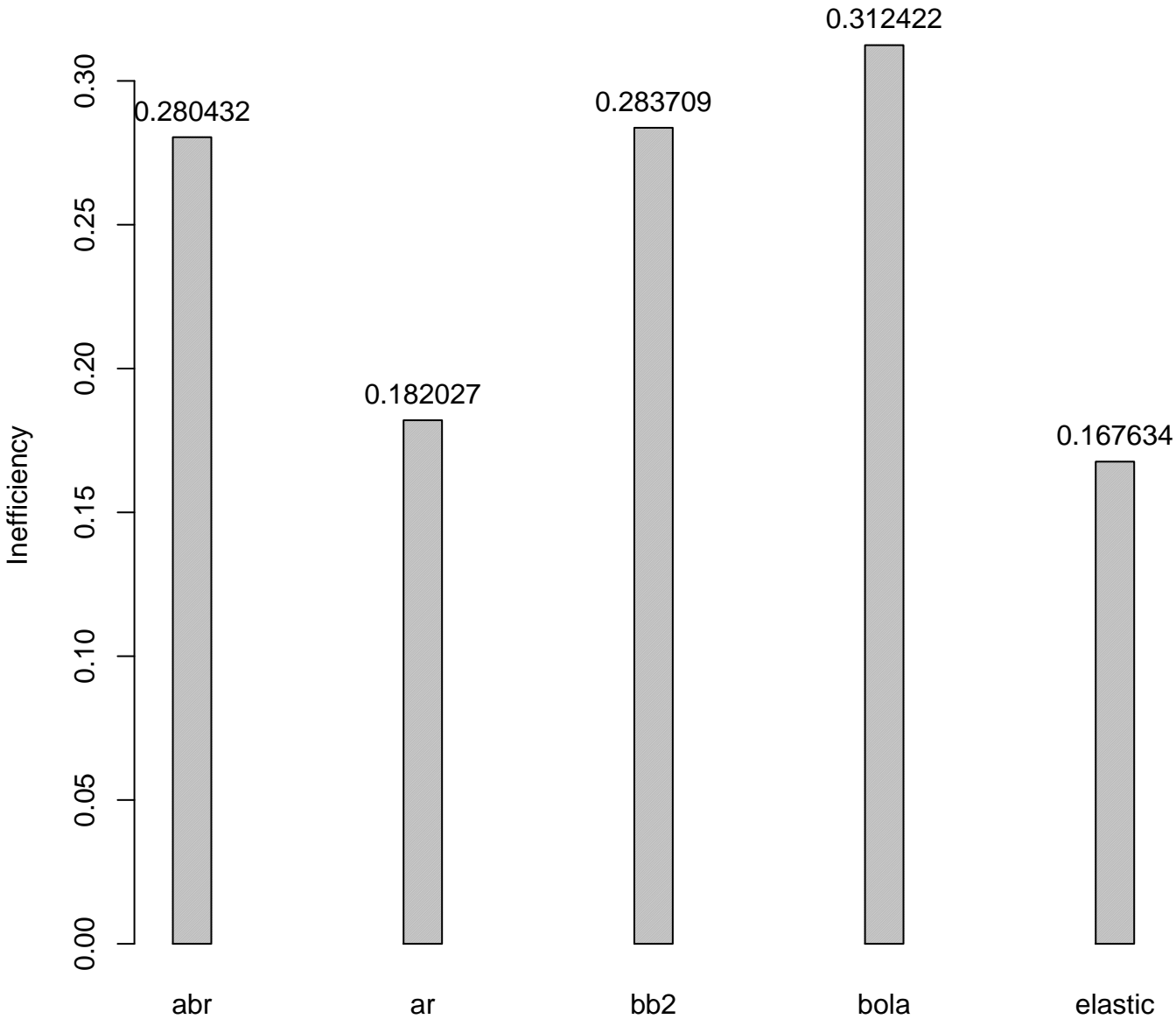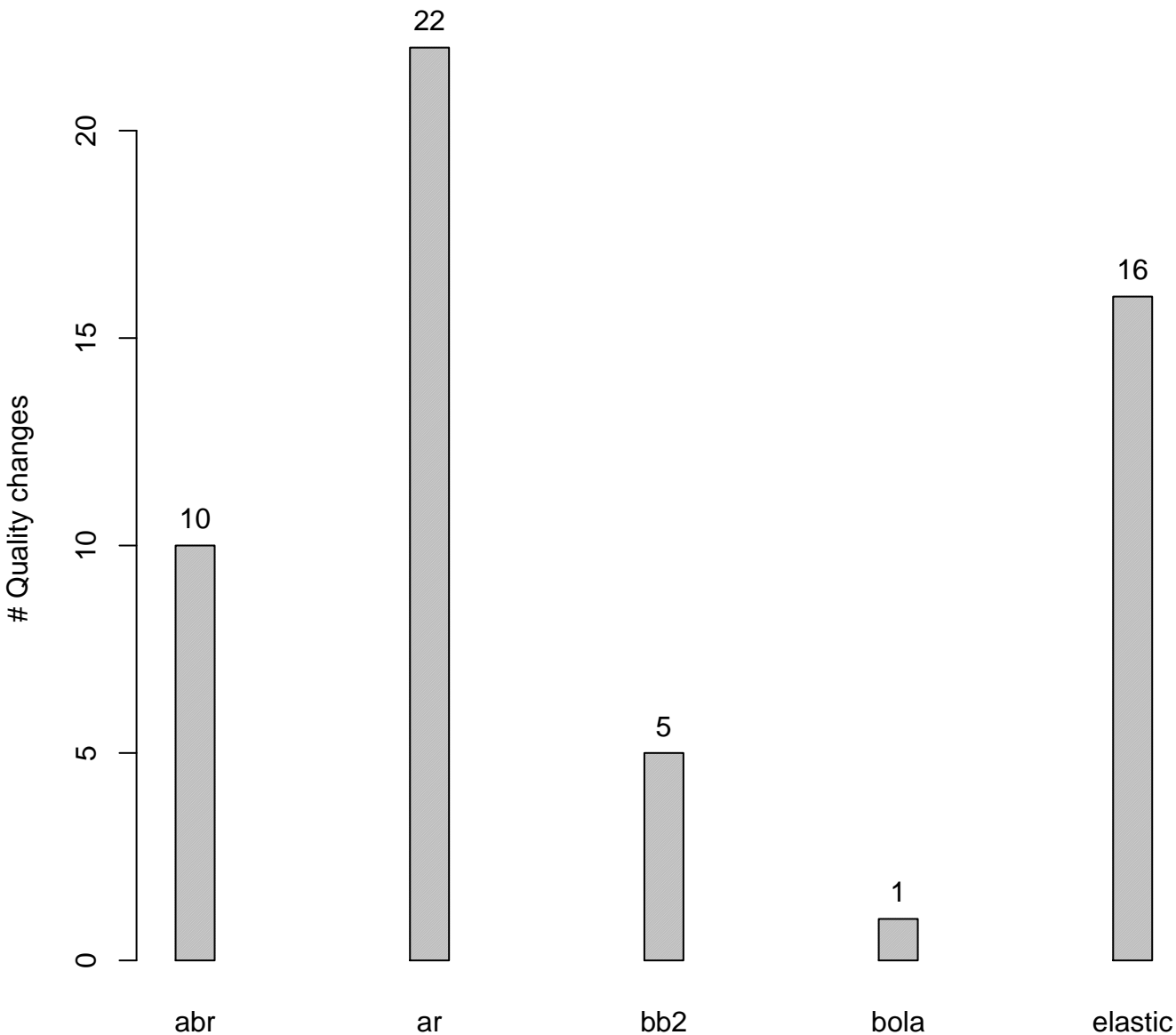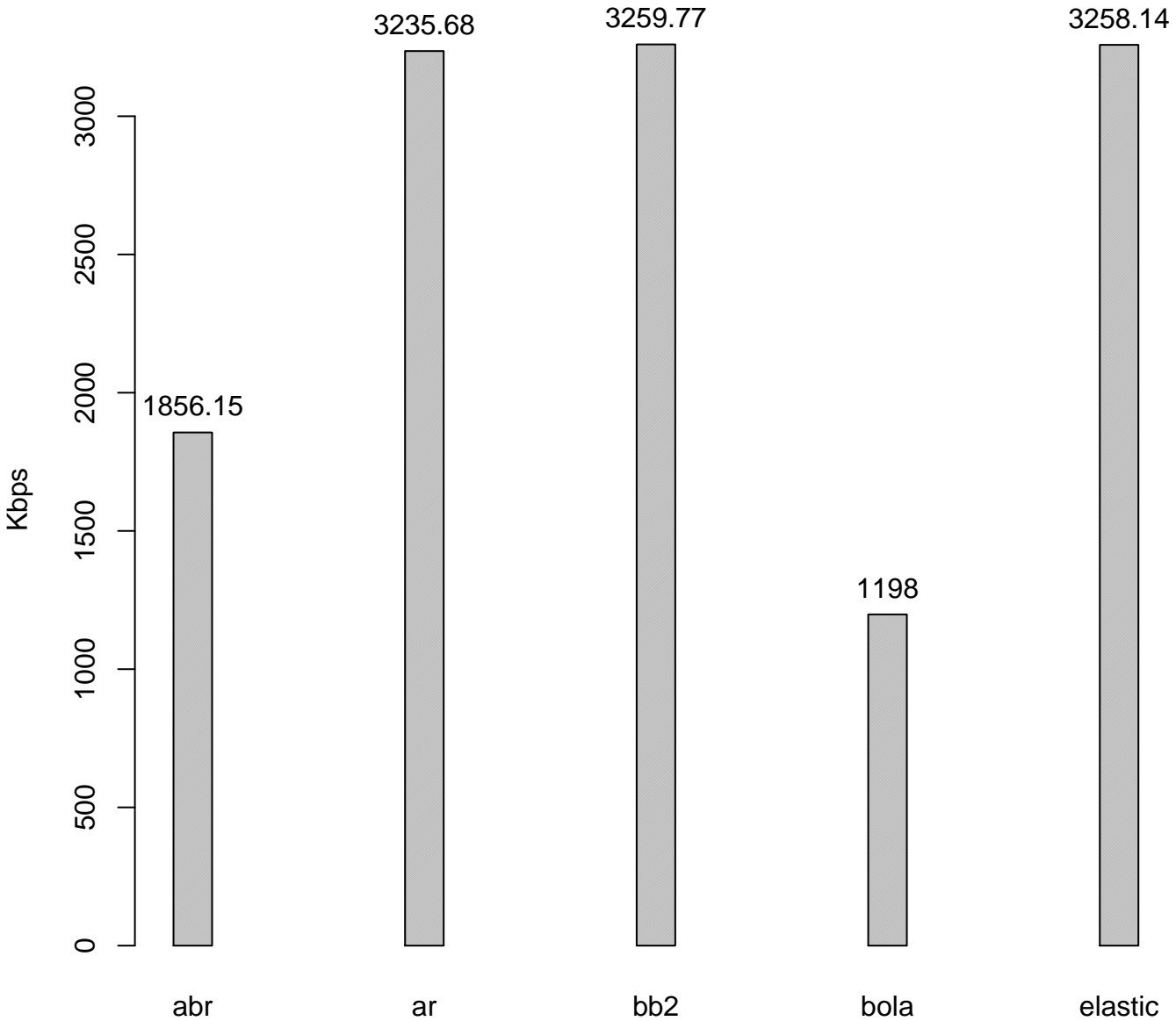Buffer: 120   min: bola**

Network profile: p2 Sample: t4 Metric: Avg−Bitrate
Buffer: 120 max: elastic

Network profile: p2 Sample: t4 Metric: Inefficiency
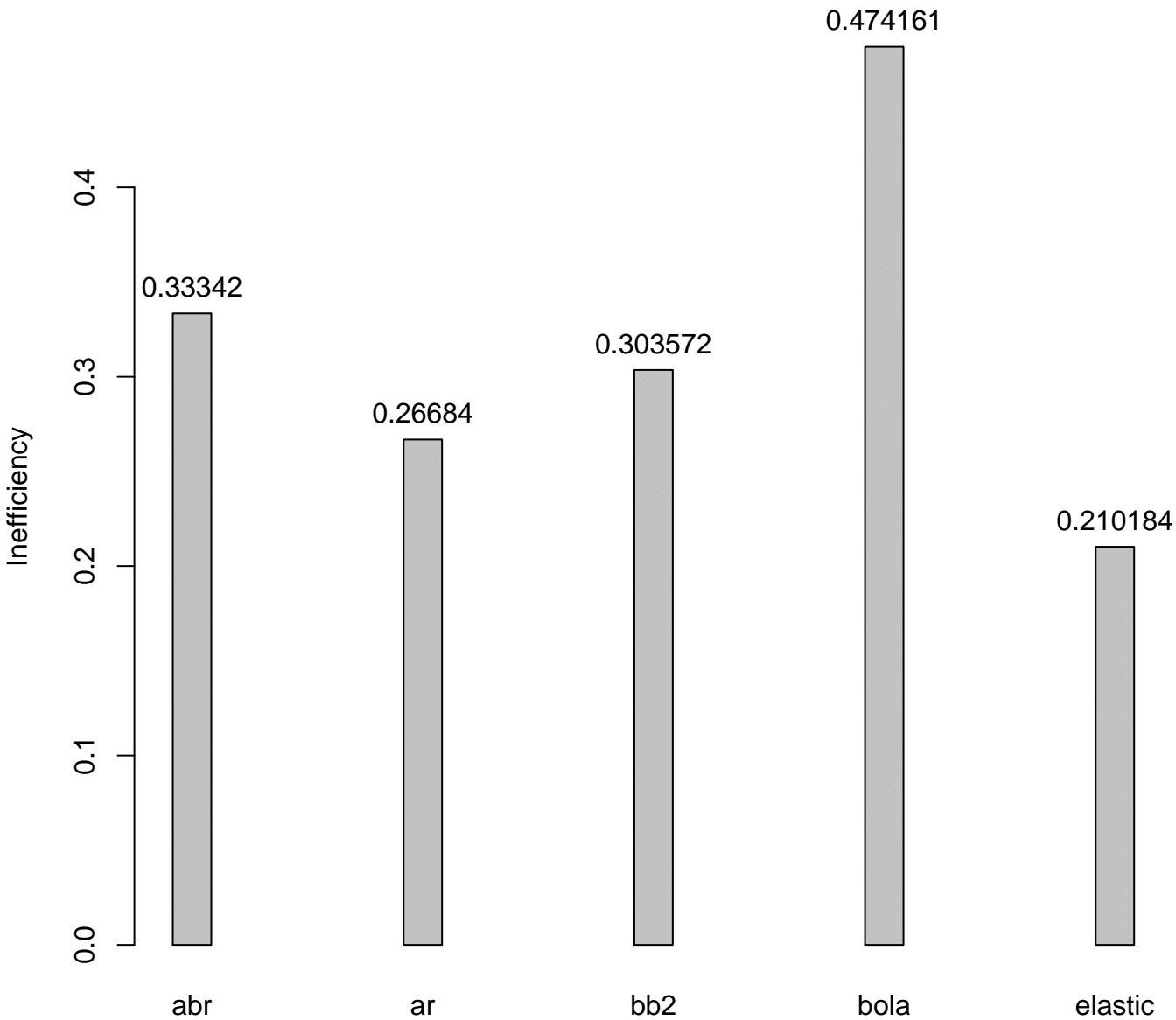**Buffer: 120 min: elastic**

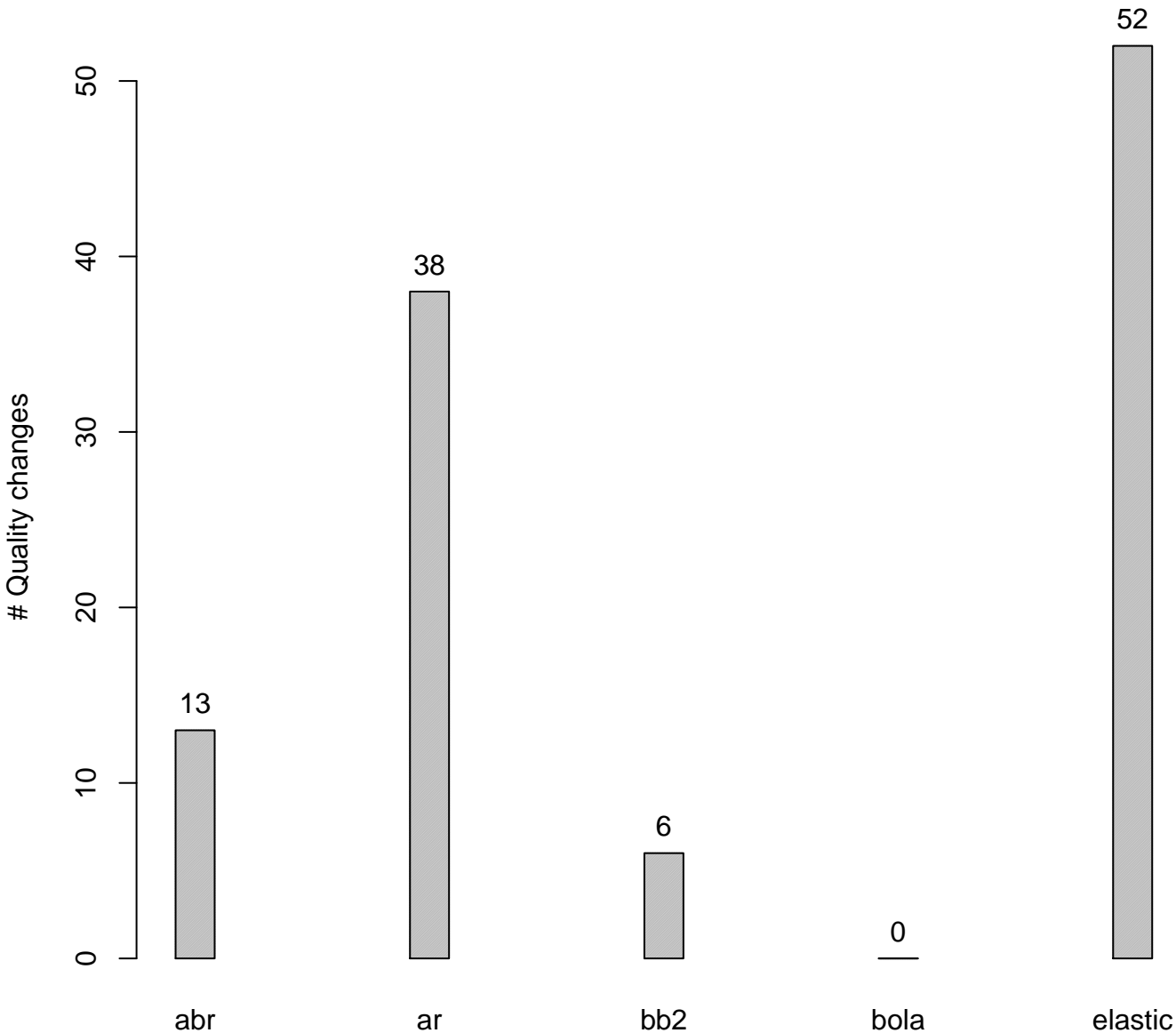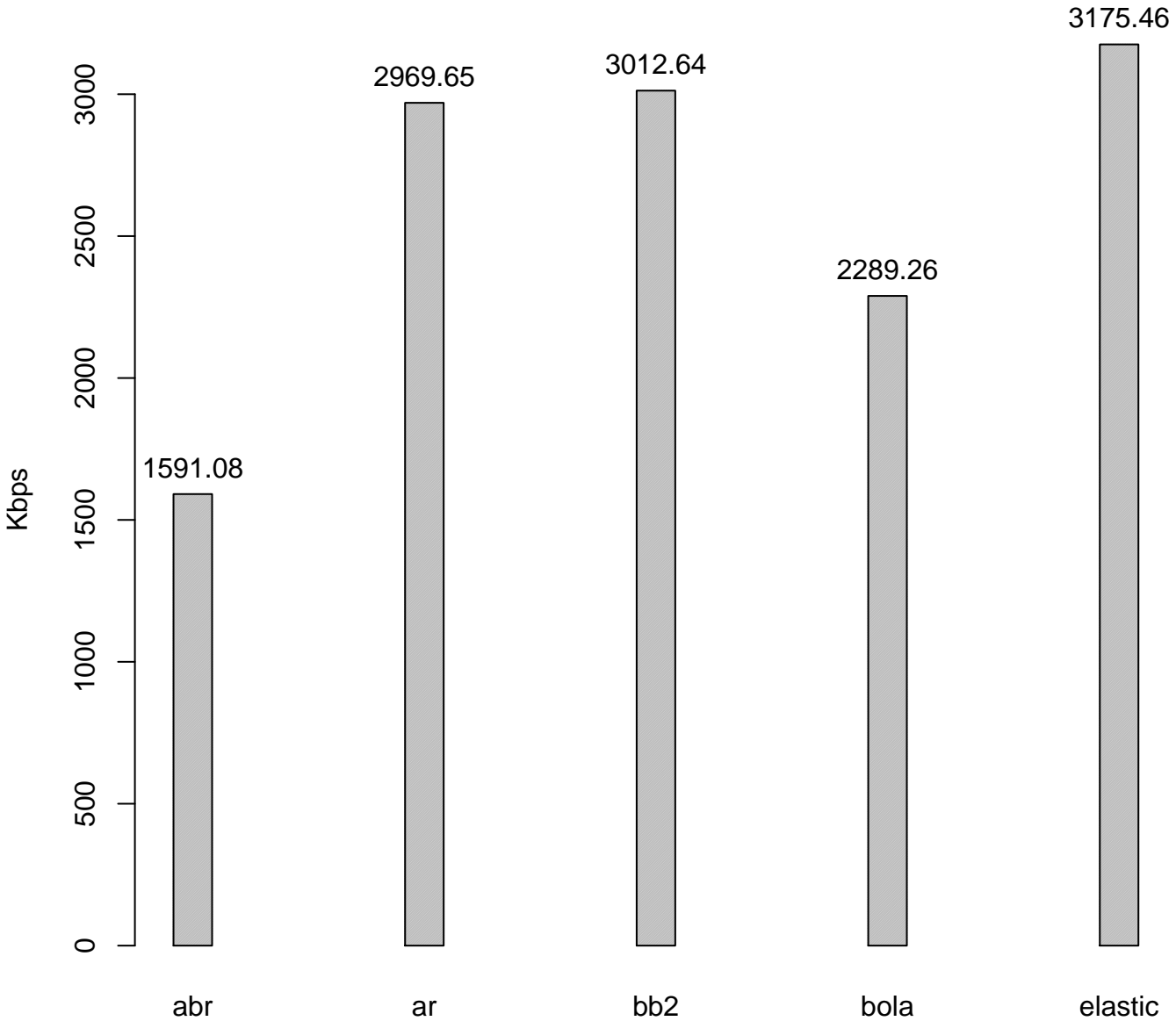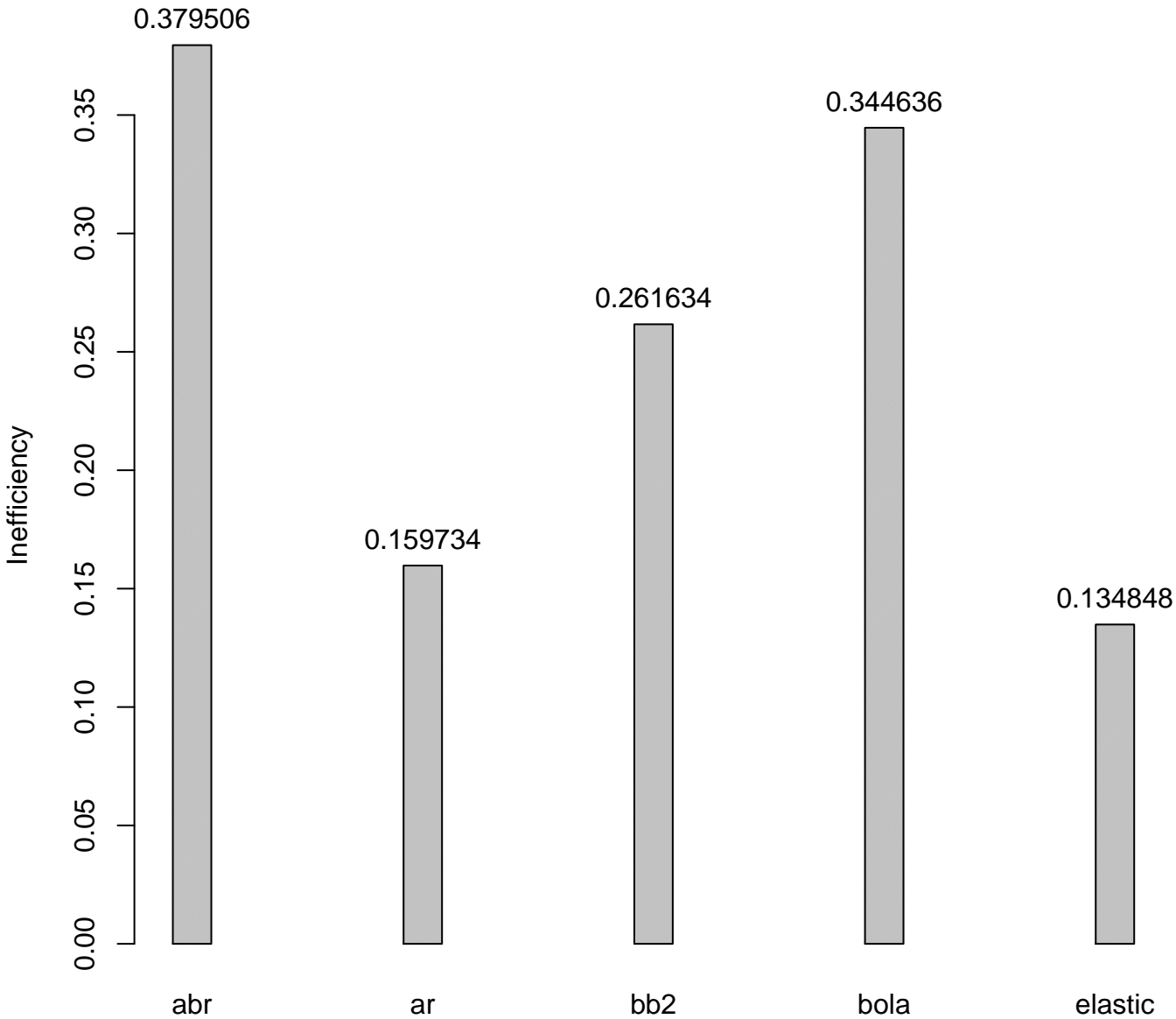**Network profile: p2 Sample: t4 Metric: # quality change Buffer: 120 min: bola**

Network profile: p2 Sample: t5 Metric: Avg−Bitrate
Buffer: 120 max: ar

Network profile: p2 Sample: t5 Metric: Inefficiency
Buffer: 120 min: bola

Inefficiency

0.578587

0.437646   0.44114   0.436527   0.480441

abr   ar   bb2   bola   elastic

**Network profile: p2 Sample: t5 Metric: # quality change
Buffer: 120 min: abr**

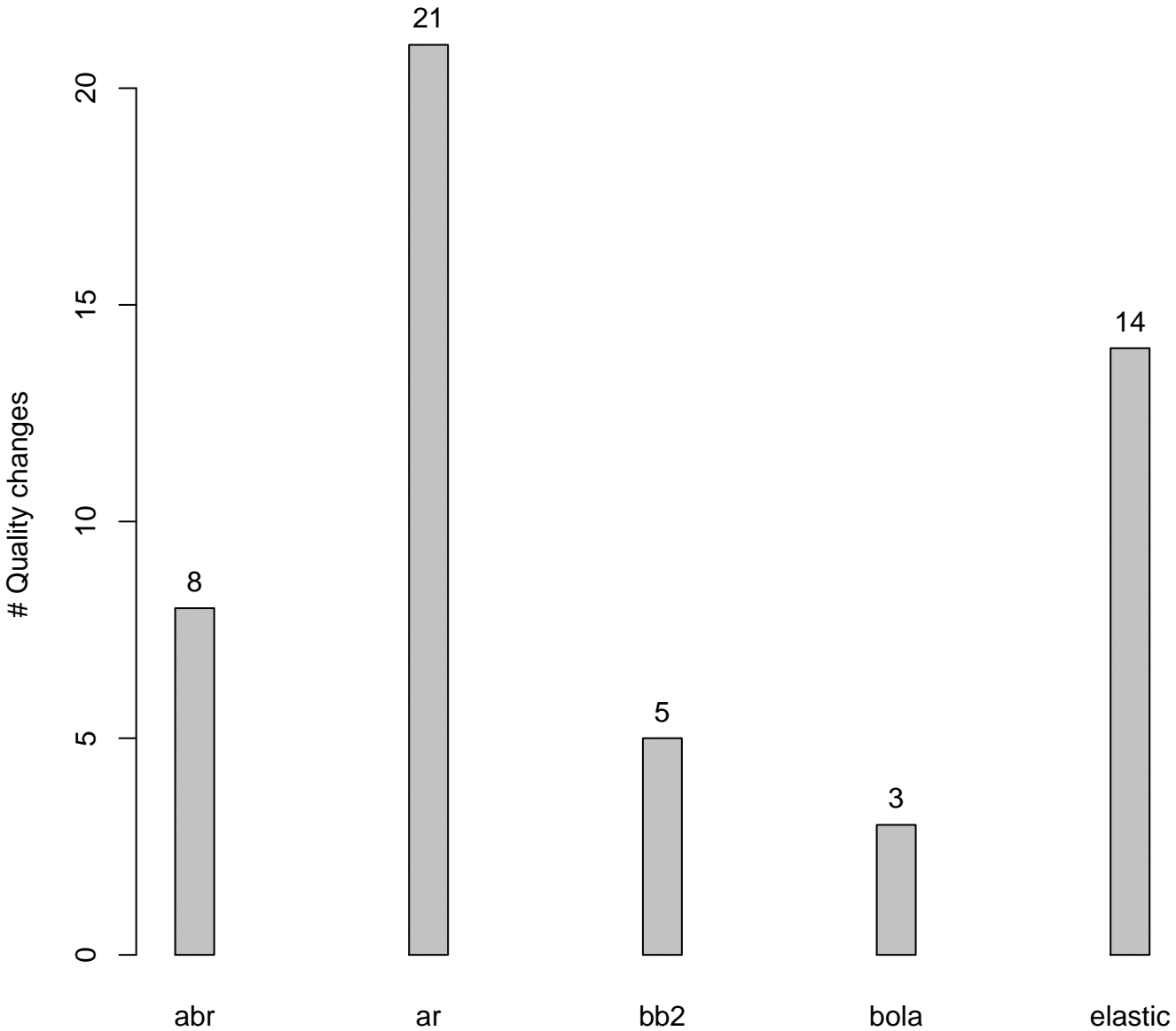**Network profile: p2 Sample: t6 Metric: Avg−Bitrate**
Buffer: 120 max: elastic

Network profile: p2 Sample: t6 Metric: Inefficiency
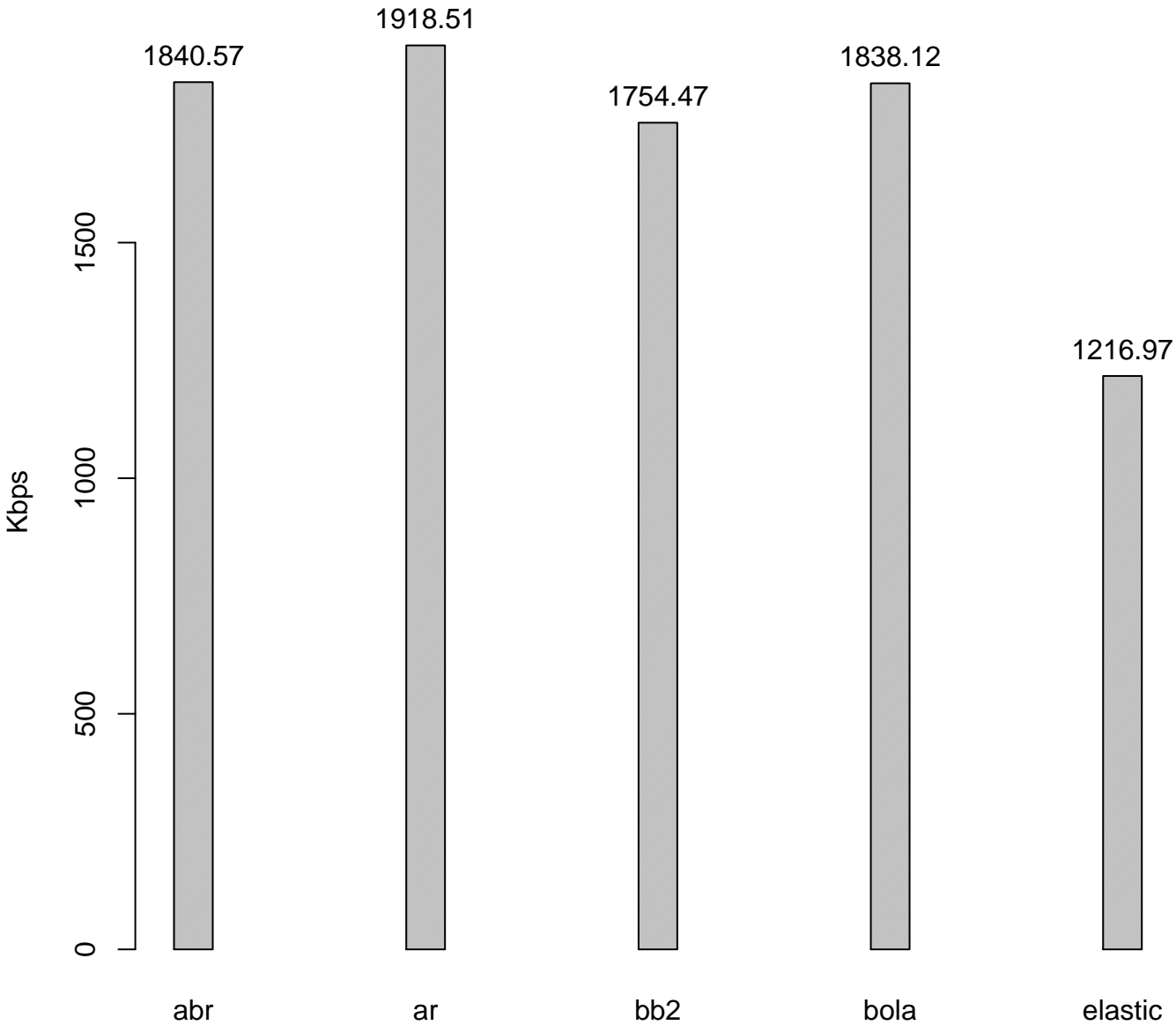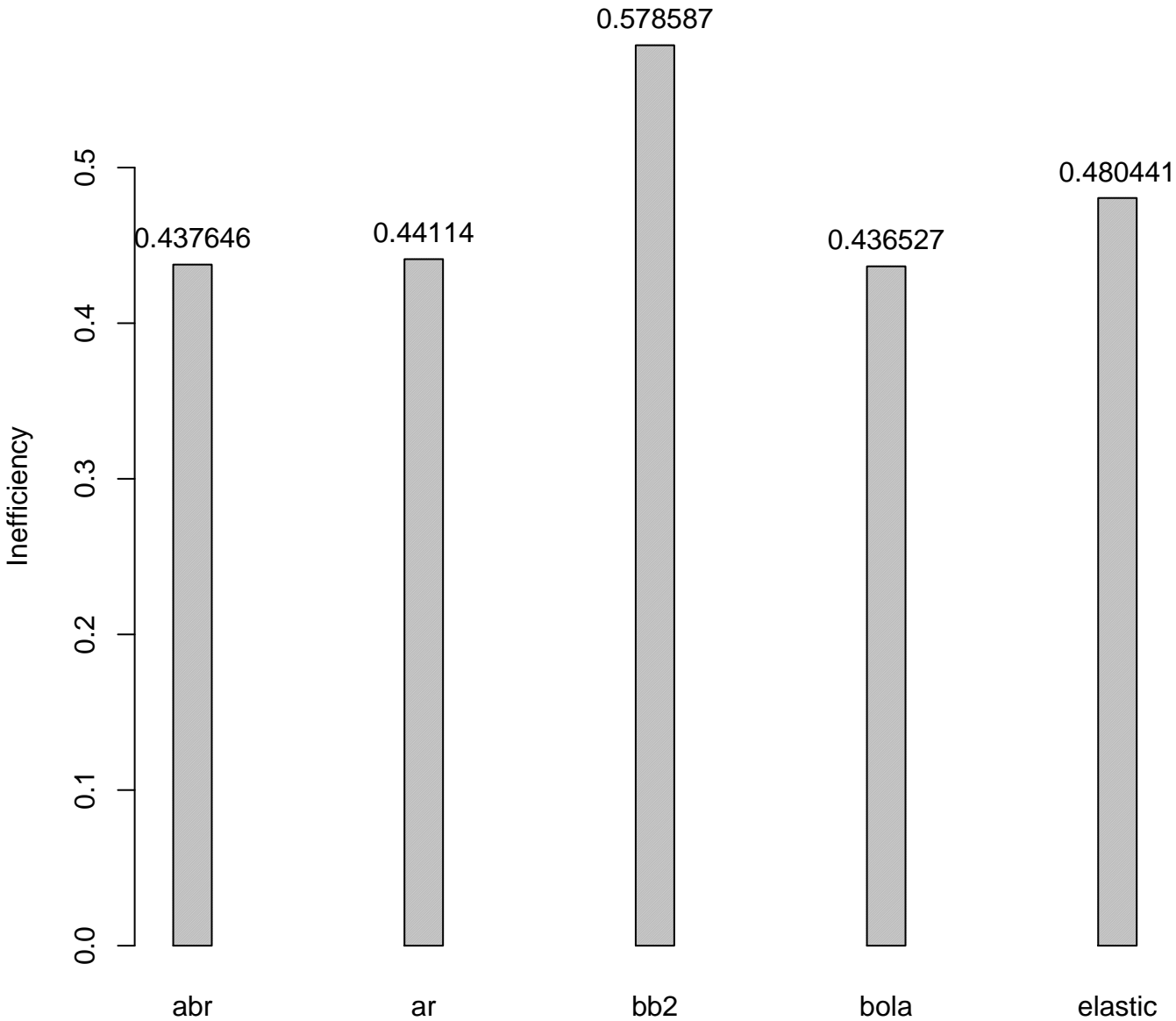**Buffer: 120 min: elastic**

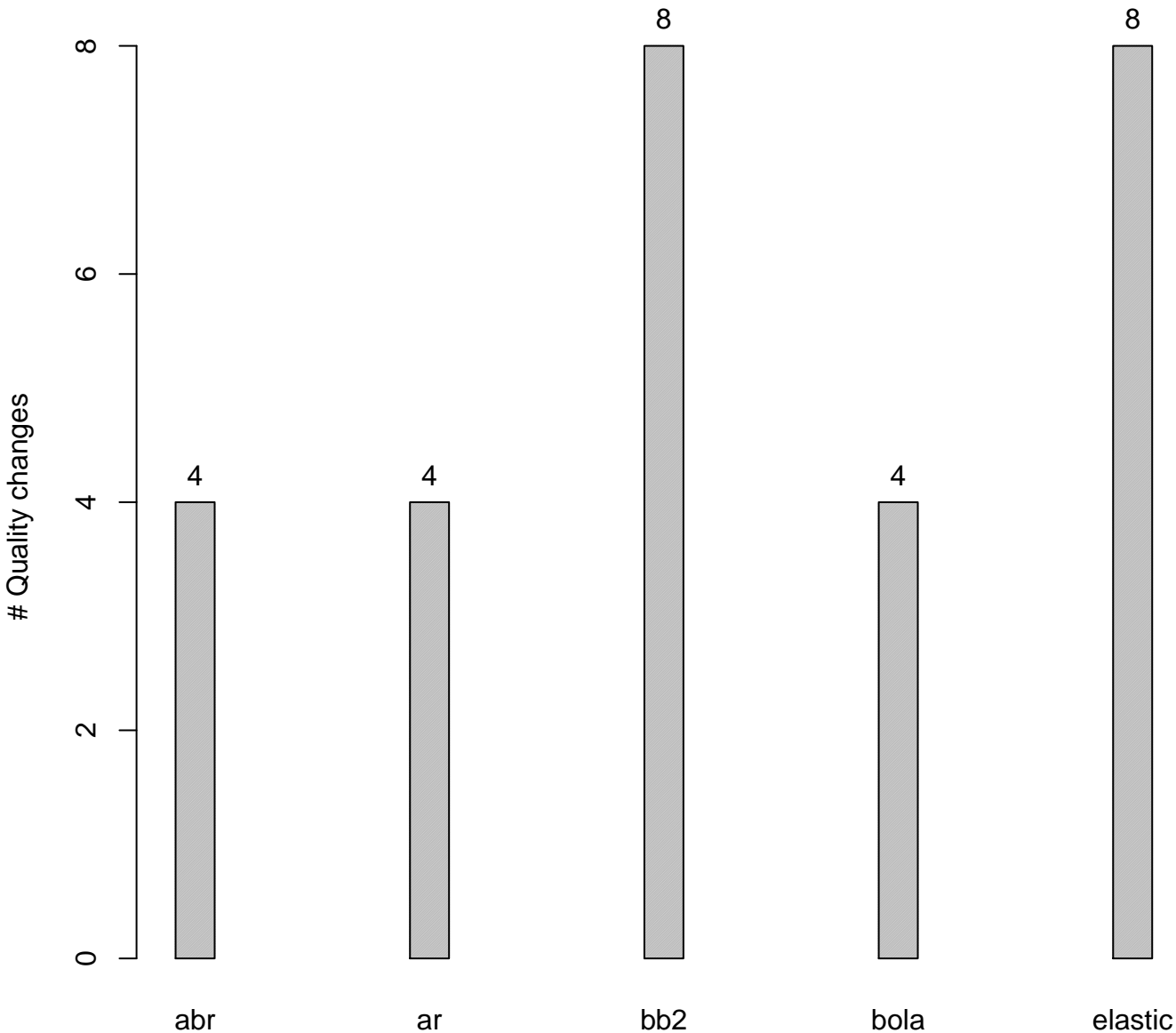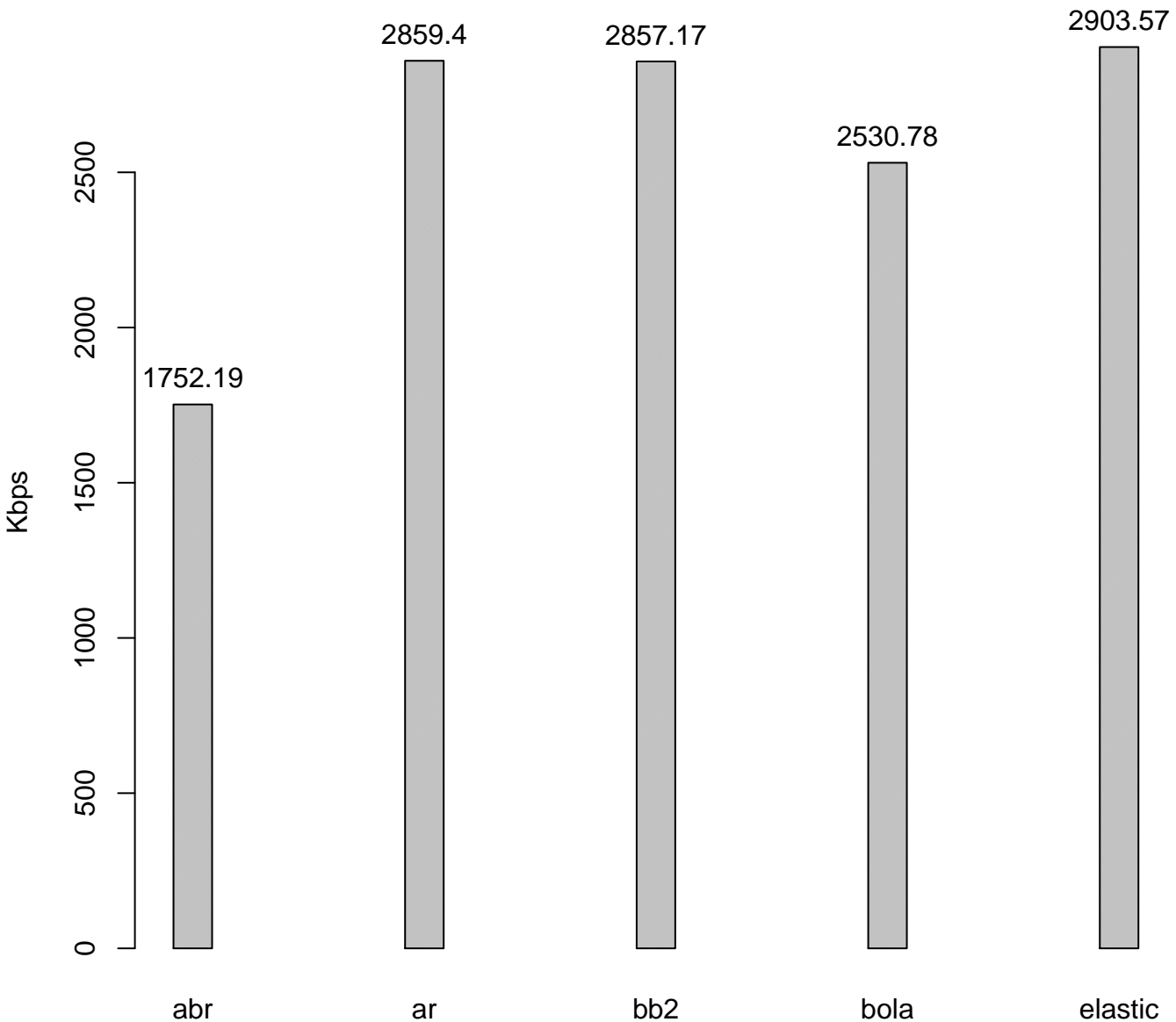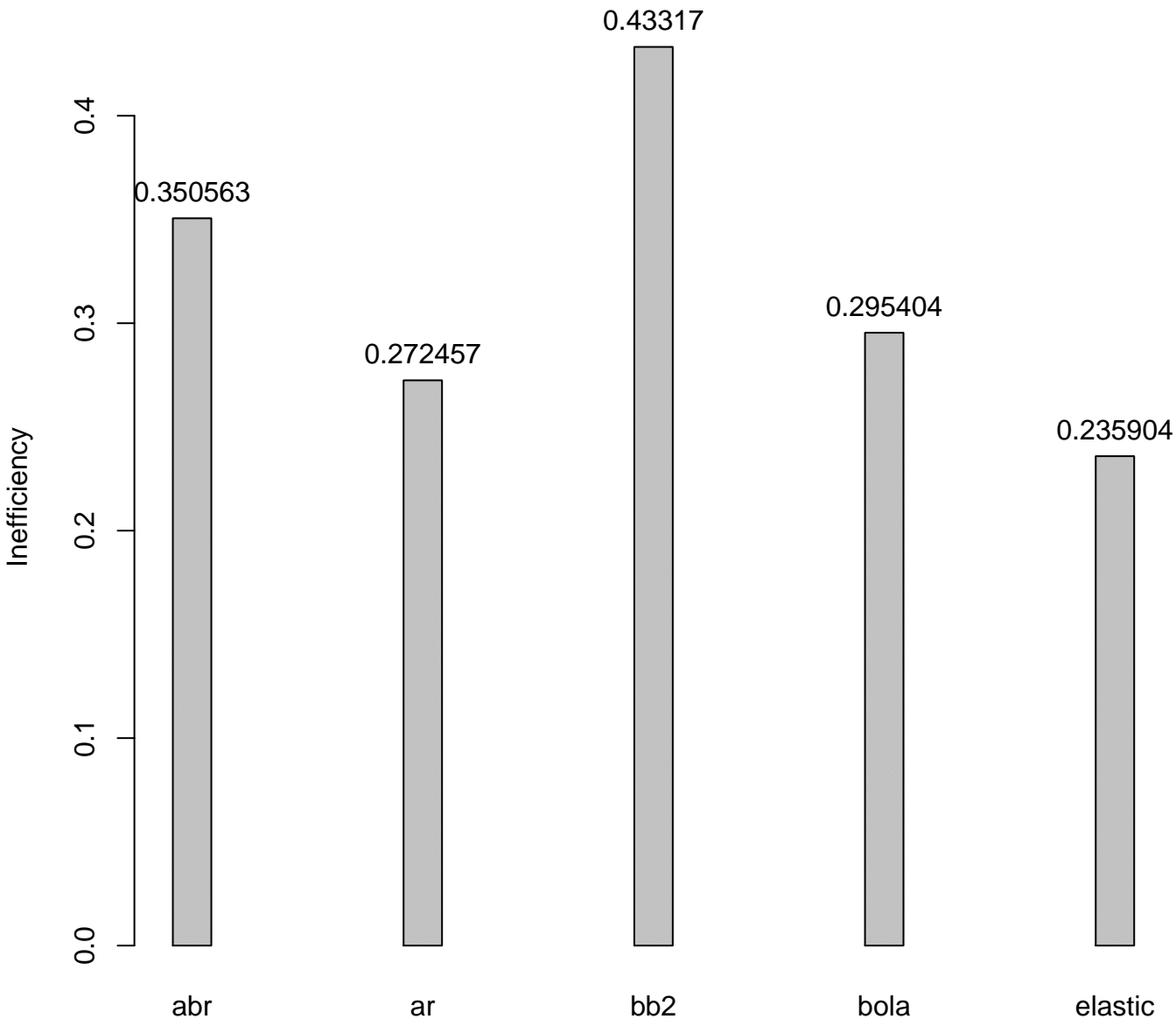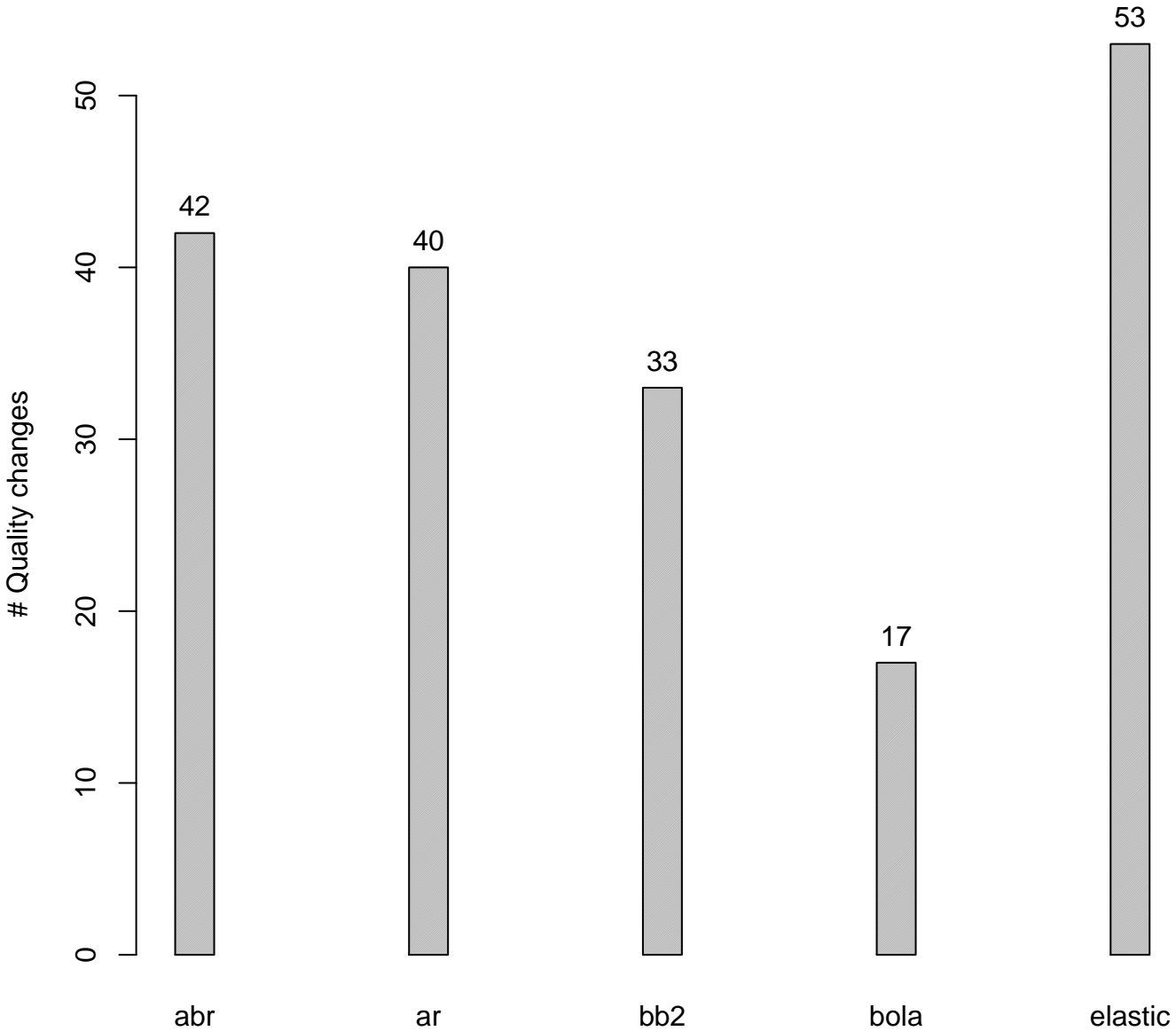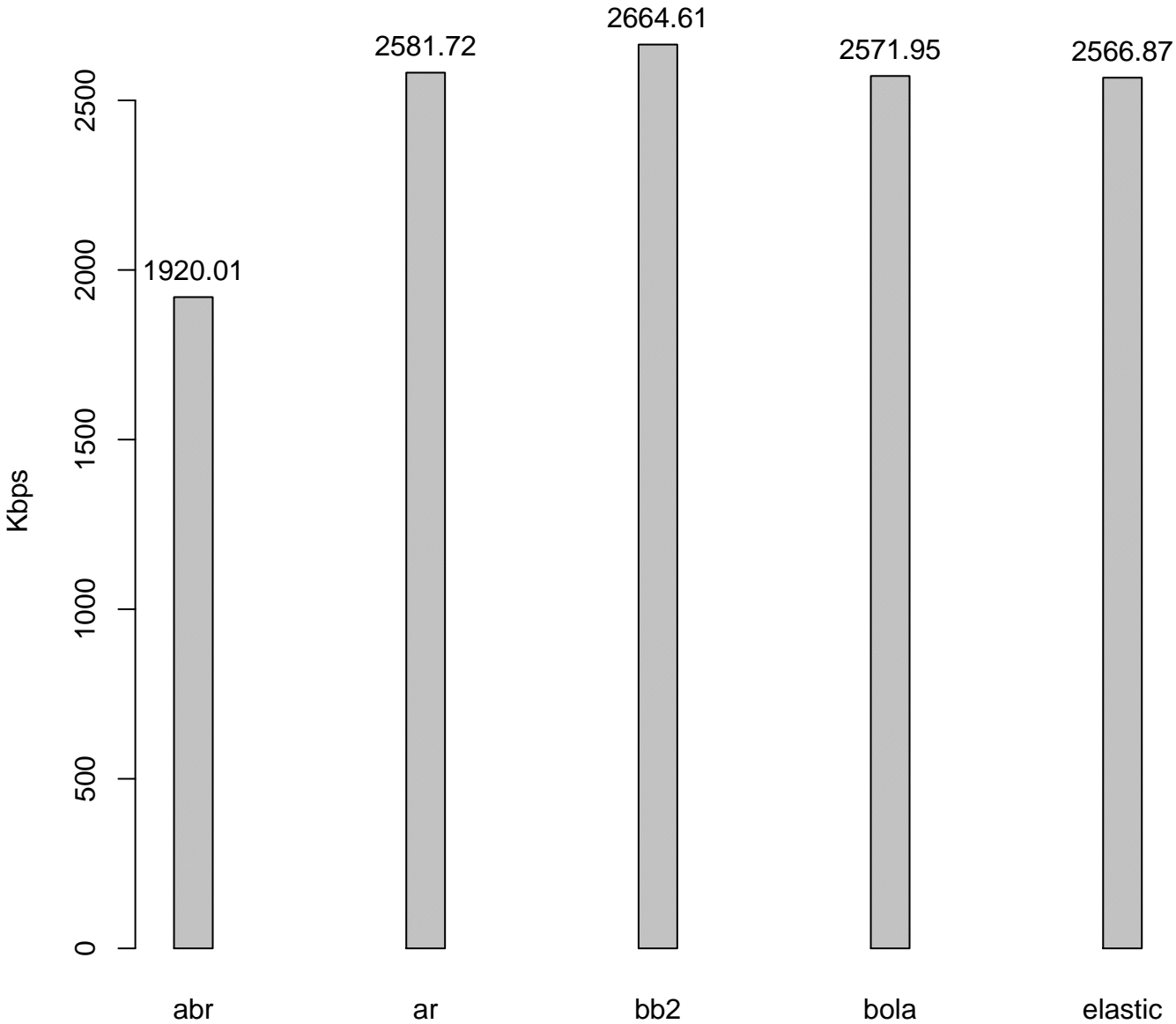**Network profile: p2 Sample: t6 Metric: # quality change
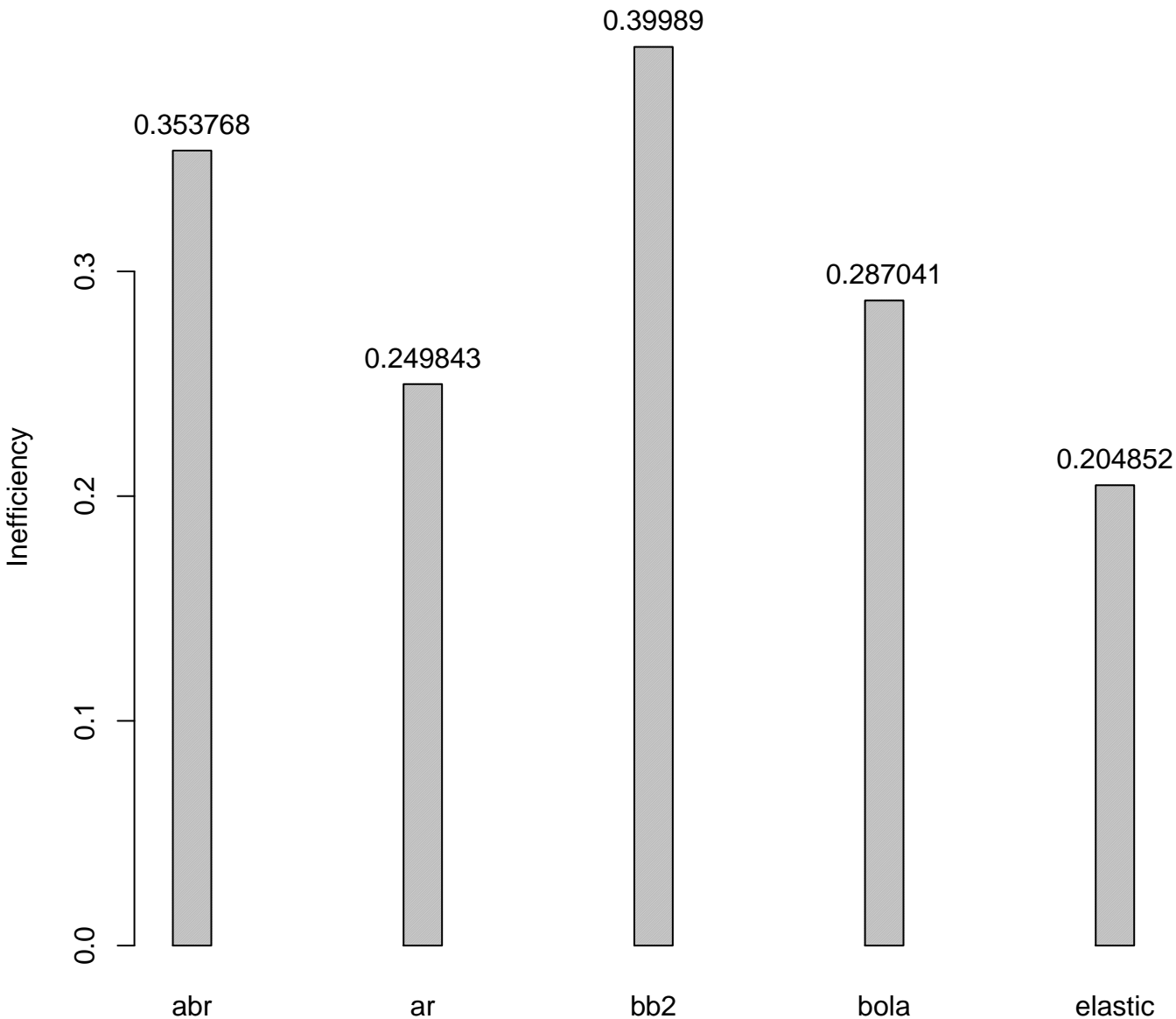Buffer: 120 min: bola**

Network profile: p2 Sample: t7 Metric: Avg−Bitrate
Buffer: 120 max: bb2

Network profile: p2 Sample: t7 Metric: Inefficiency
Buffer: 120 min: elastic

Inefficiency

abr: 0.353768
ar: 0.249843
bb2: 0.39989
bola: 0.287041
elastic: 0.204852

Network profile: p2 Sample: t7 Metric: # quality change
Buffer: 120 min: bola

Network profile: p3 Sample: t1 Metric: Avg−Bitrate
Buffer: 120 max: bb2

Kbps

1330.26

1760.74

1865.37
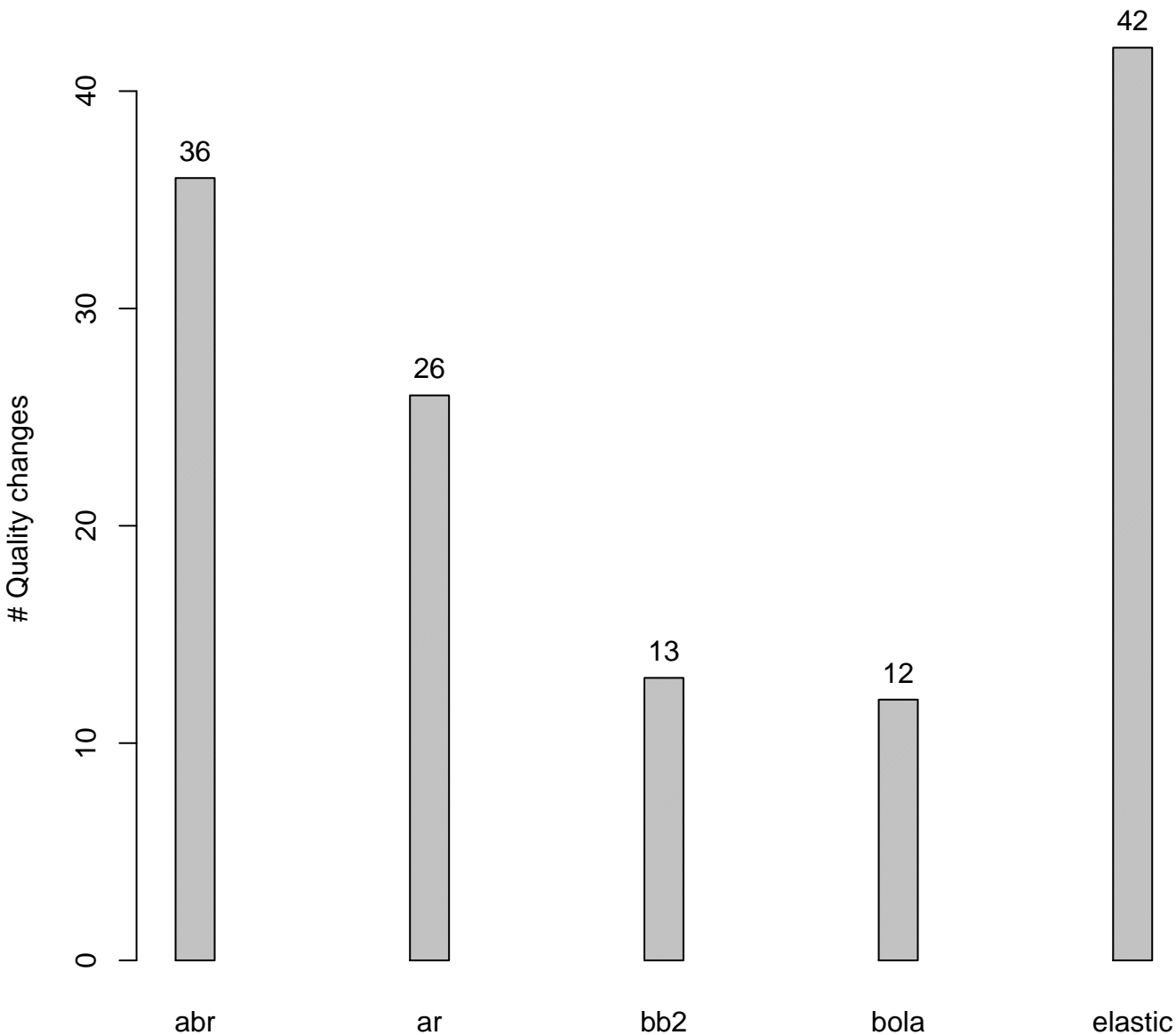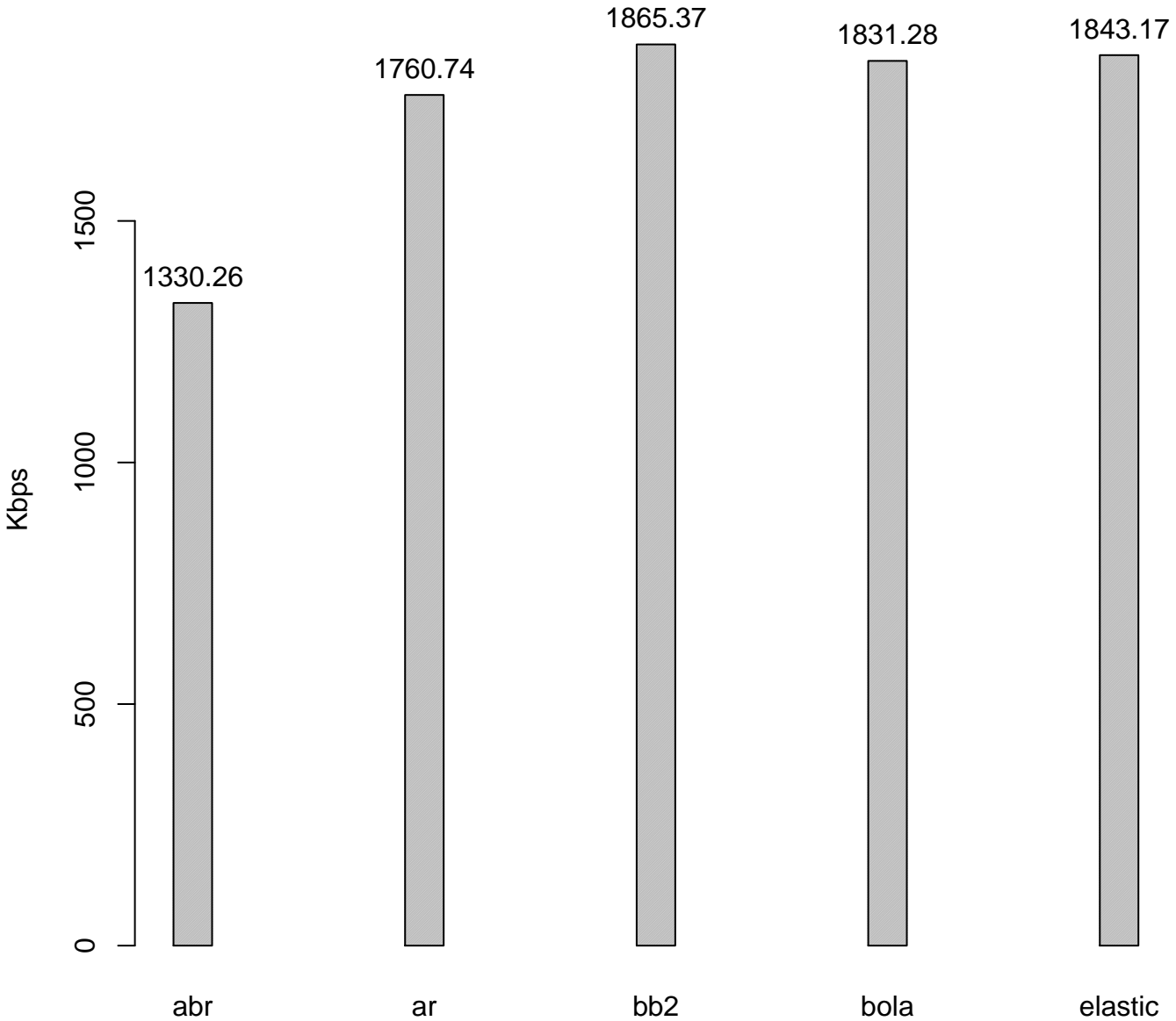
1831.28

1843.17

abr

ar

bb2

bola

elastic

Network profile: p3 Sample: t1 Metric: Inefficiency
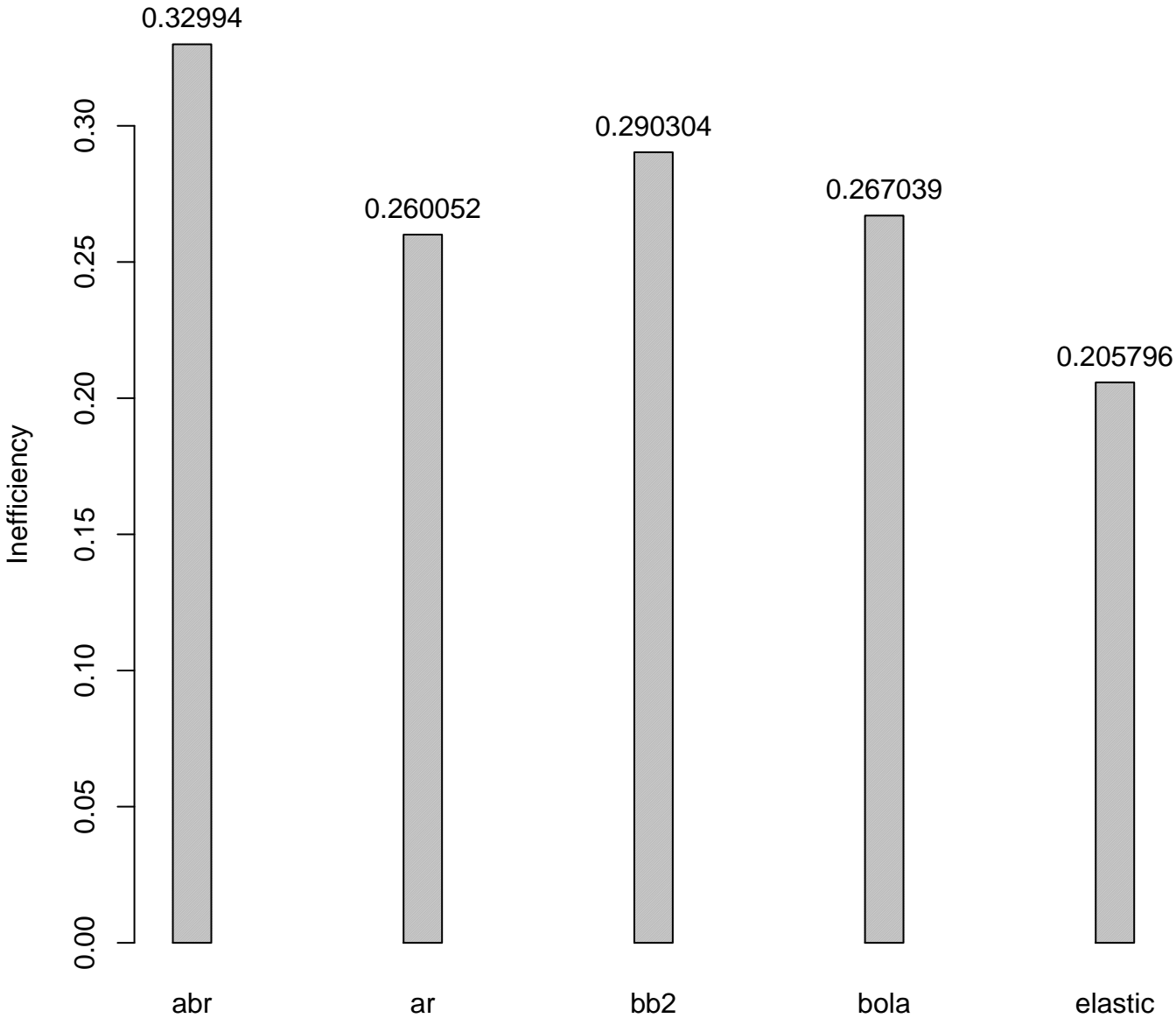**Buffer: 120 min: elastic**

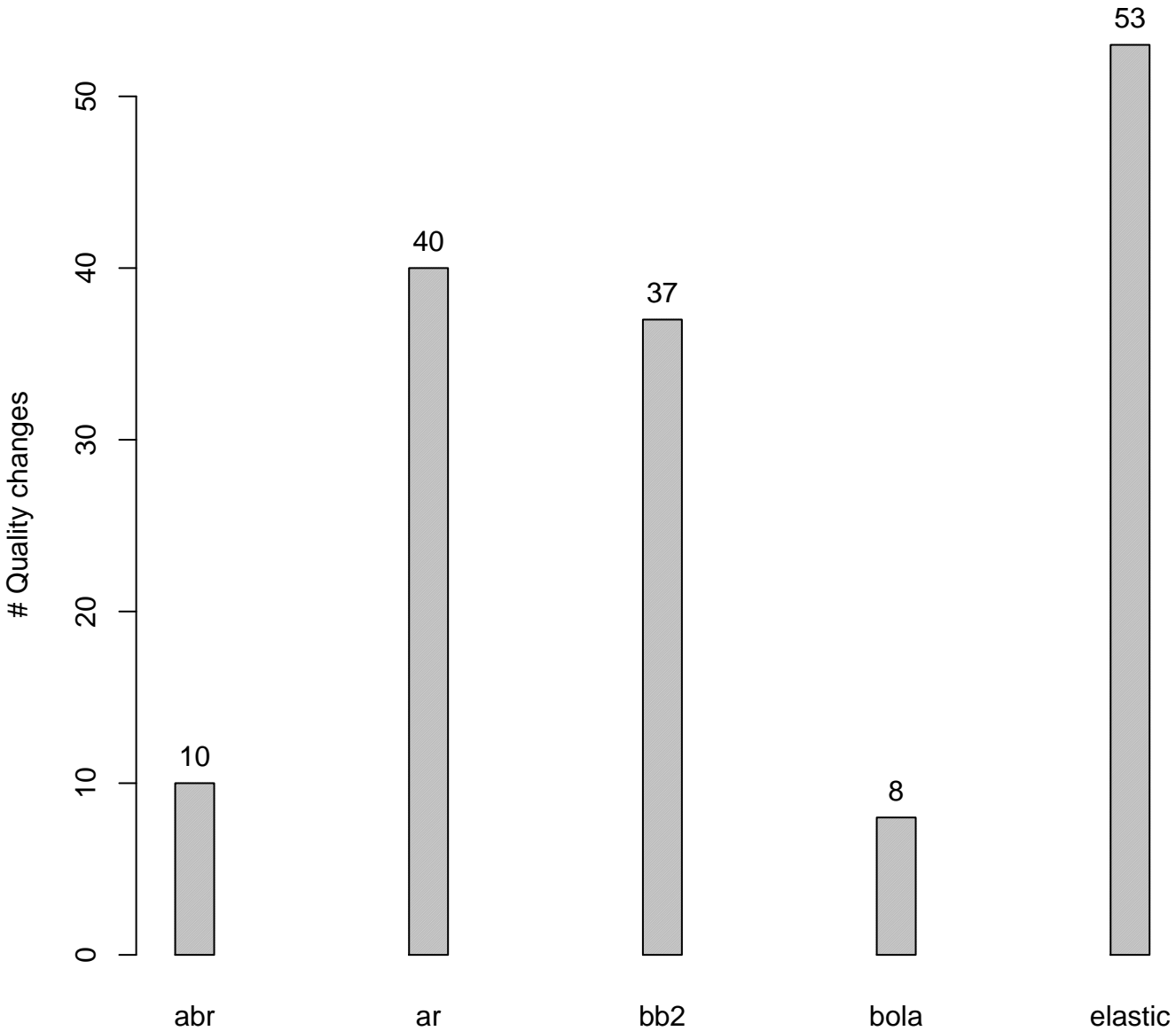**Network profile: p3 Sample: t1 Metric: # quality change**
Buffer: 120 min: bola

Network profile: p3 Sample: t2 Metric: Avg−Bitrate
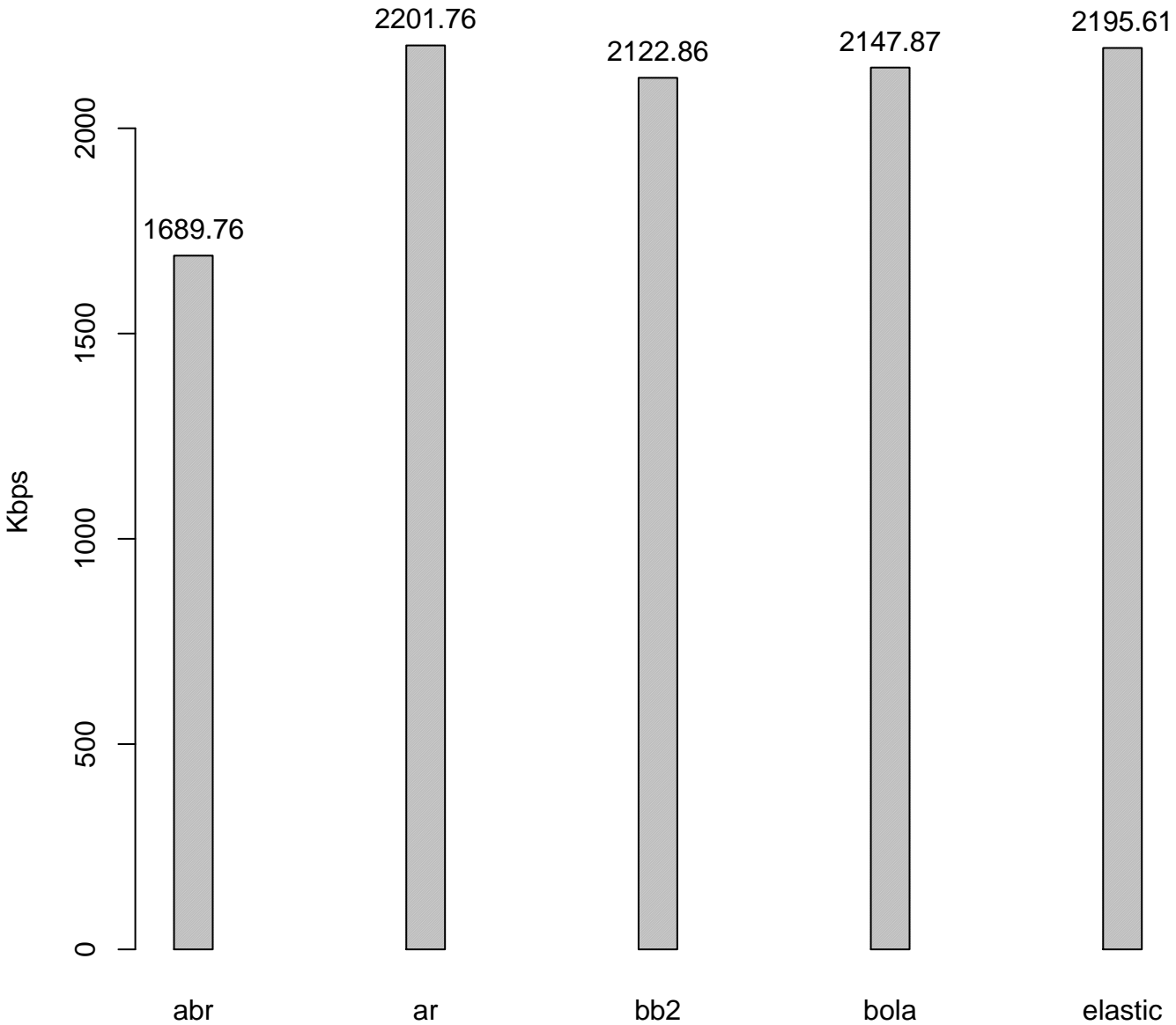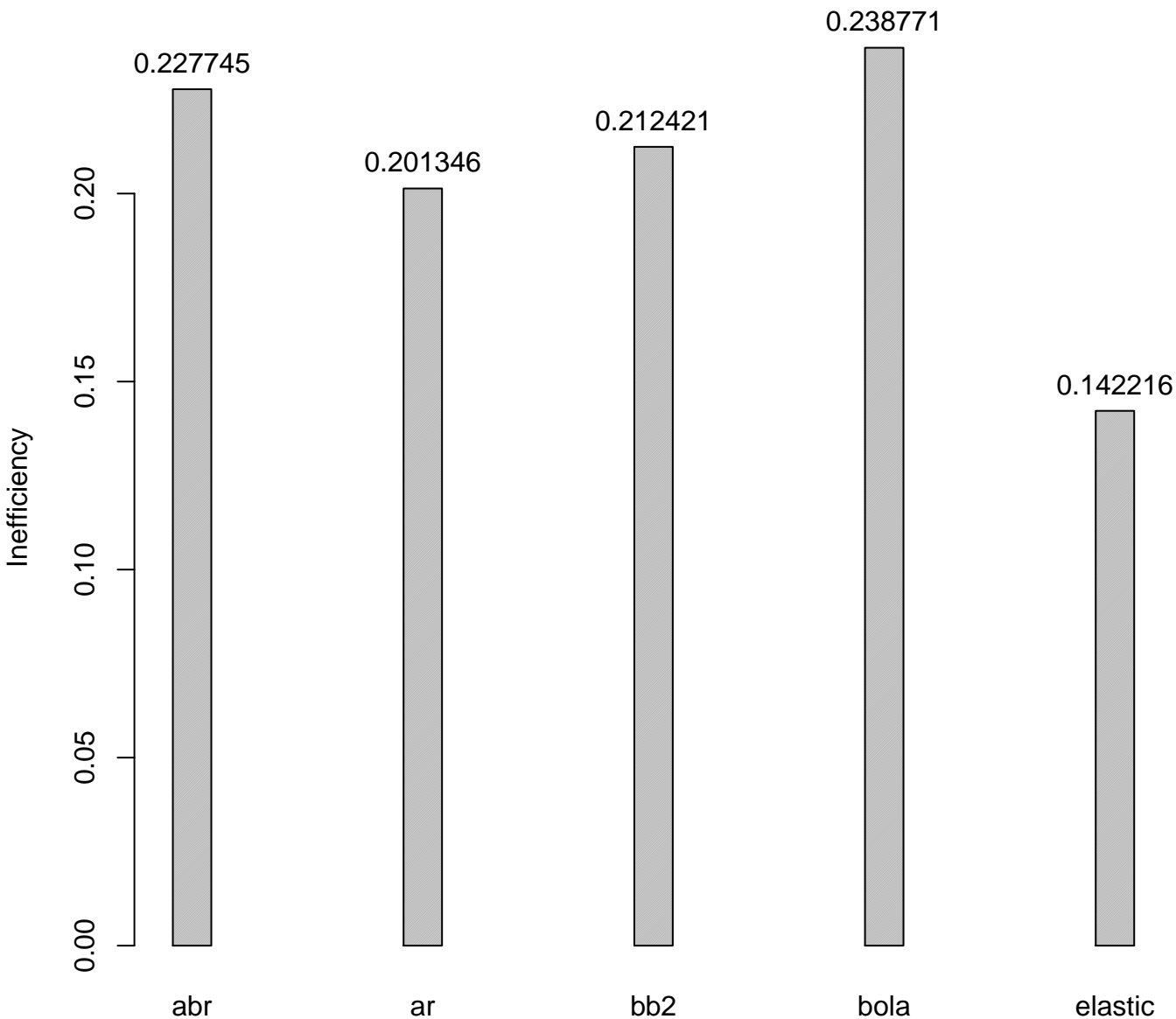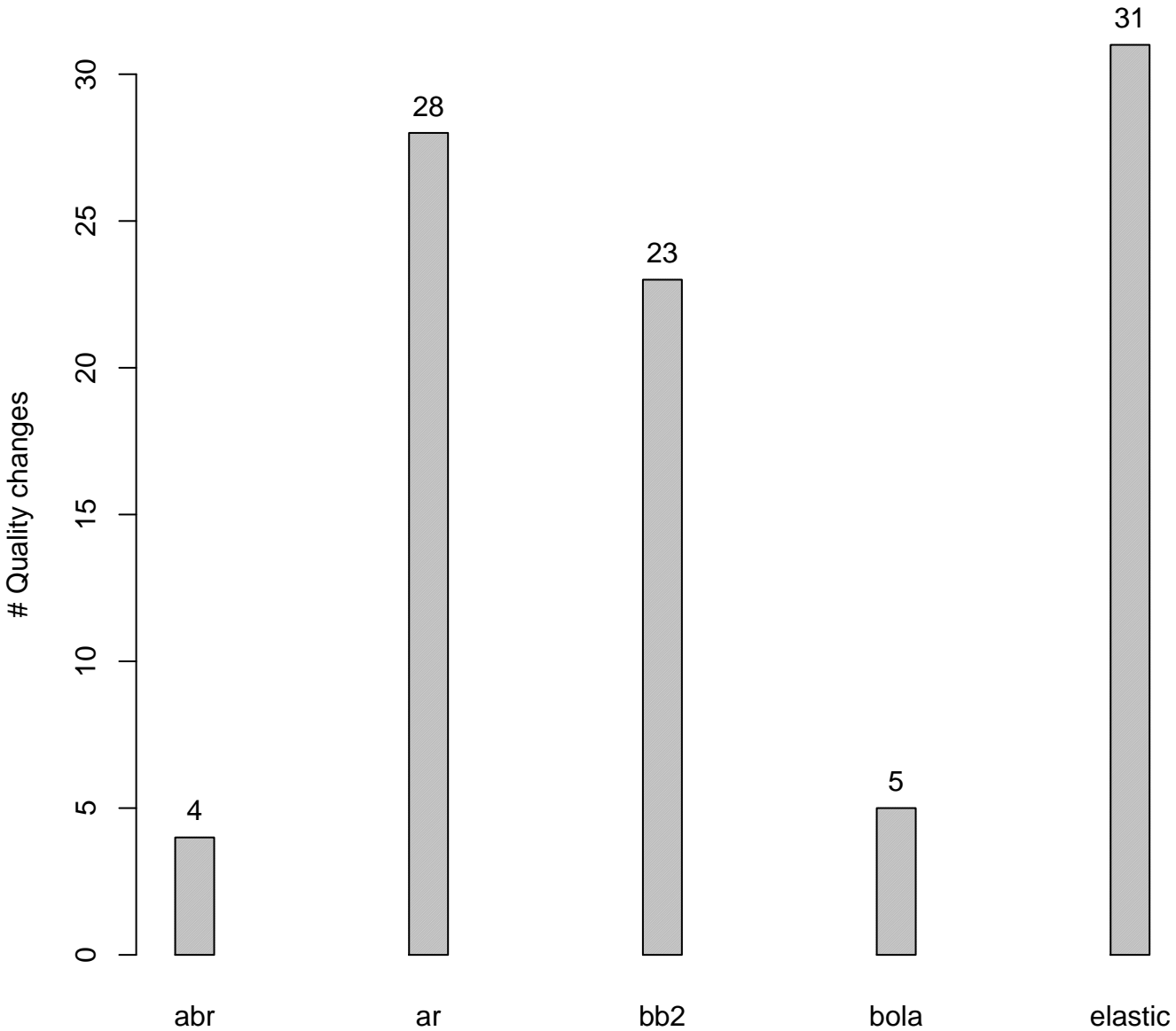**Buffer: 120 max: ar**

Network profile: p3 Sample: t2 Metric: Inefficiency
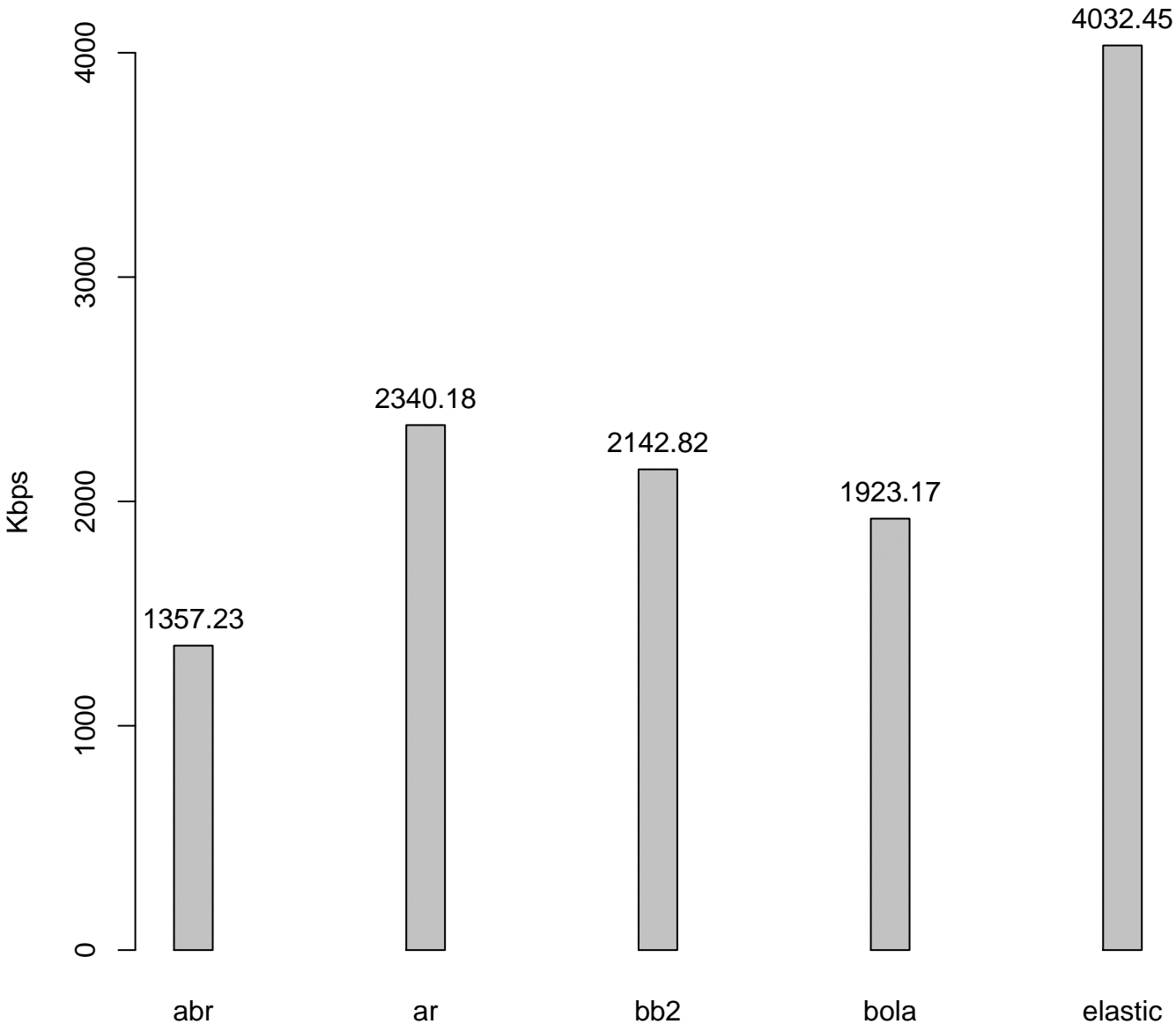**Buffer: 120 min: elastic**

Network profile: p3 Sample: t2 Metric: # quality change
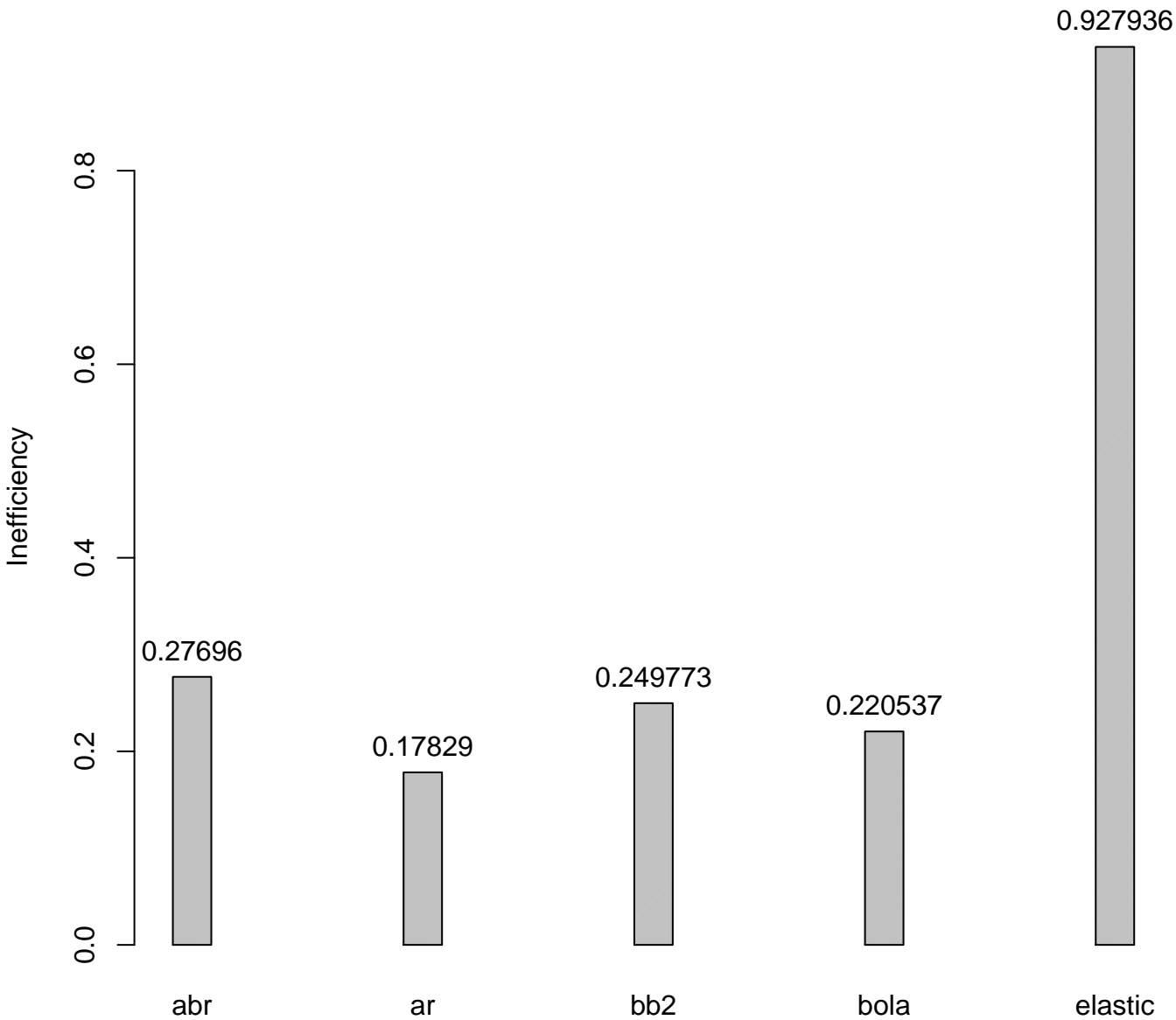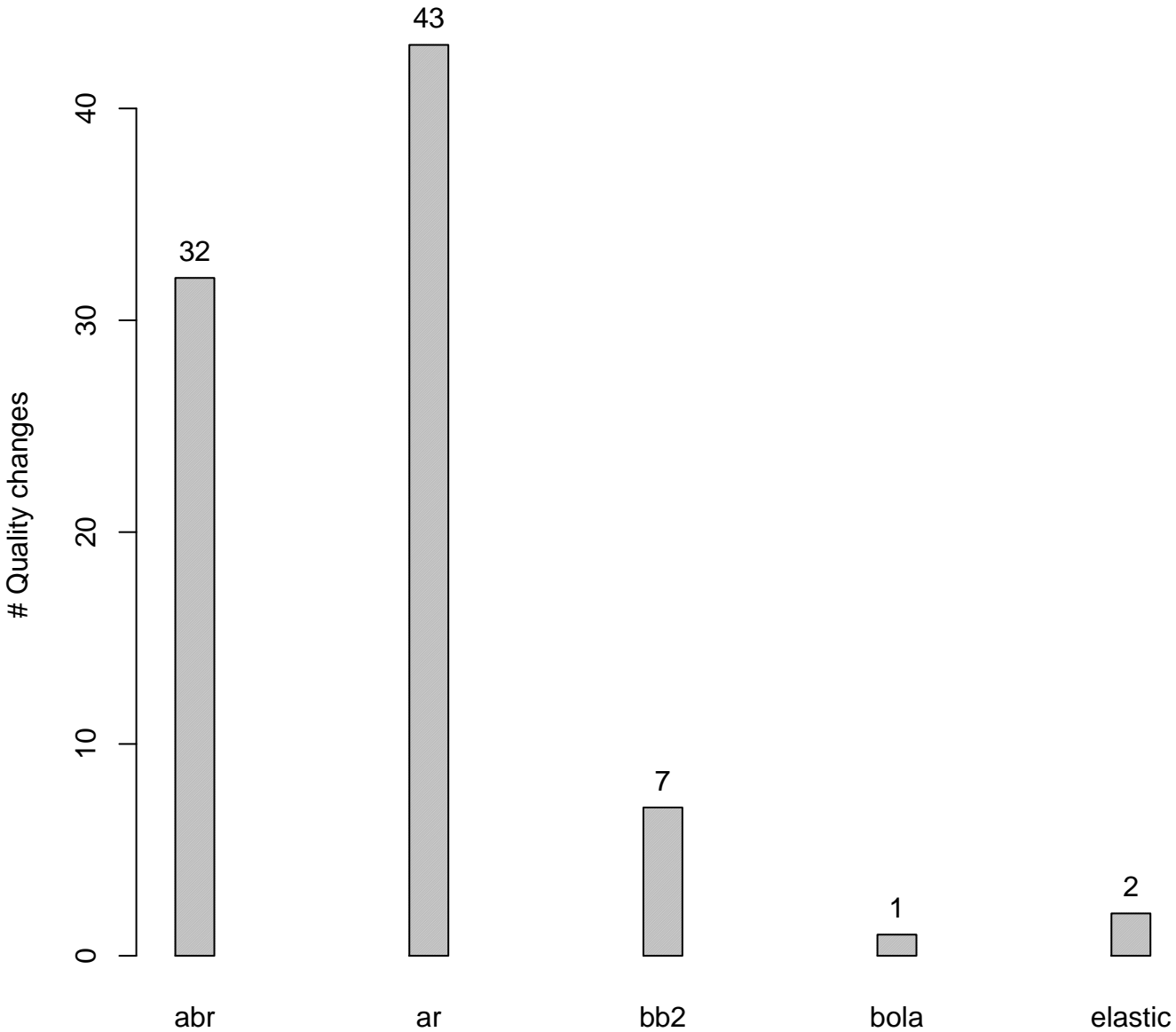**Buffer: 120 min: abr**

Network profile: p3 Sample: t3 Metric: Avg−Bitrate
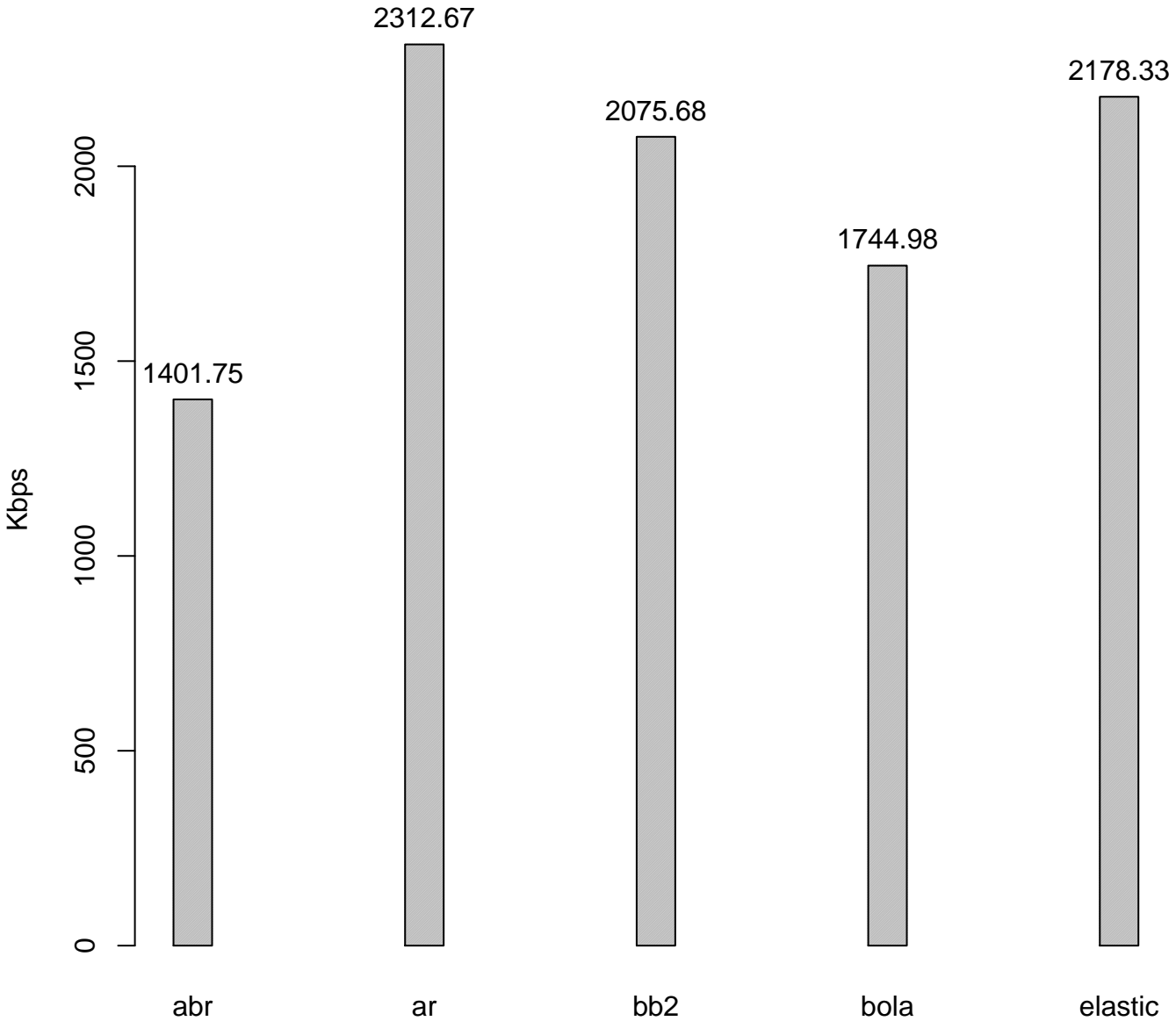**Buffer: 120 max: elastic**

Network profile: p3 Sample: t3 Metric: Inefficiency
Buffer: 120 min: ar

Network profile: p3 Sample: t3 Metric: # quality change
Buffer: 120 min: bola

Quality changes

43

32

7

1

2

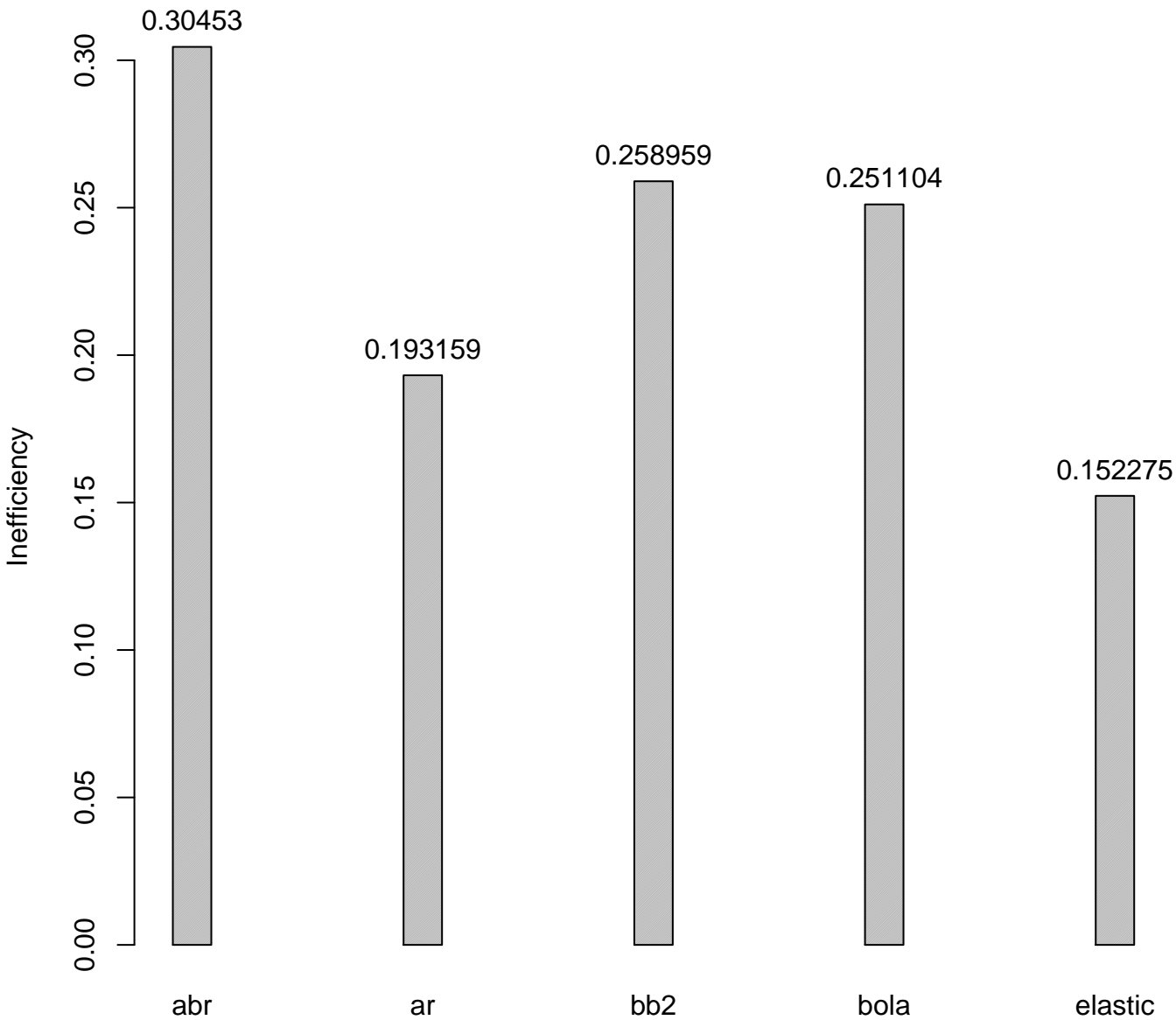abr   ar   bb2   bola   elastic

Network profile: p3 Sample: t4 Metric: Avg−Bitrate
Buffer: 120 max: ar

Network profile: p3 Sample: t4 Metric: Inefficiency
Buffer: 120 min: elastic

**Network profile: p3 Sample: t4 Metric: # quality change
Buffer: 120 min: bola**

Network profile: p3 Sample: t5 Metric: Avg−Bitrate
Buffer: 120 max: elastic

Kbps

1794.37

1650.1

1489.83

1428.04

1004.14

abr   ar   bb2   bola   elastic
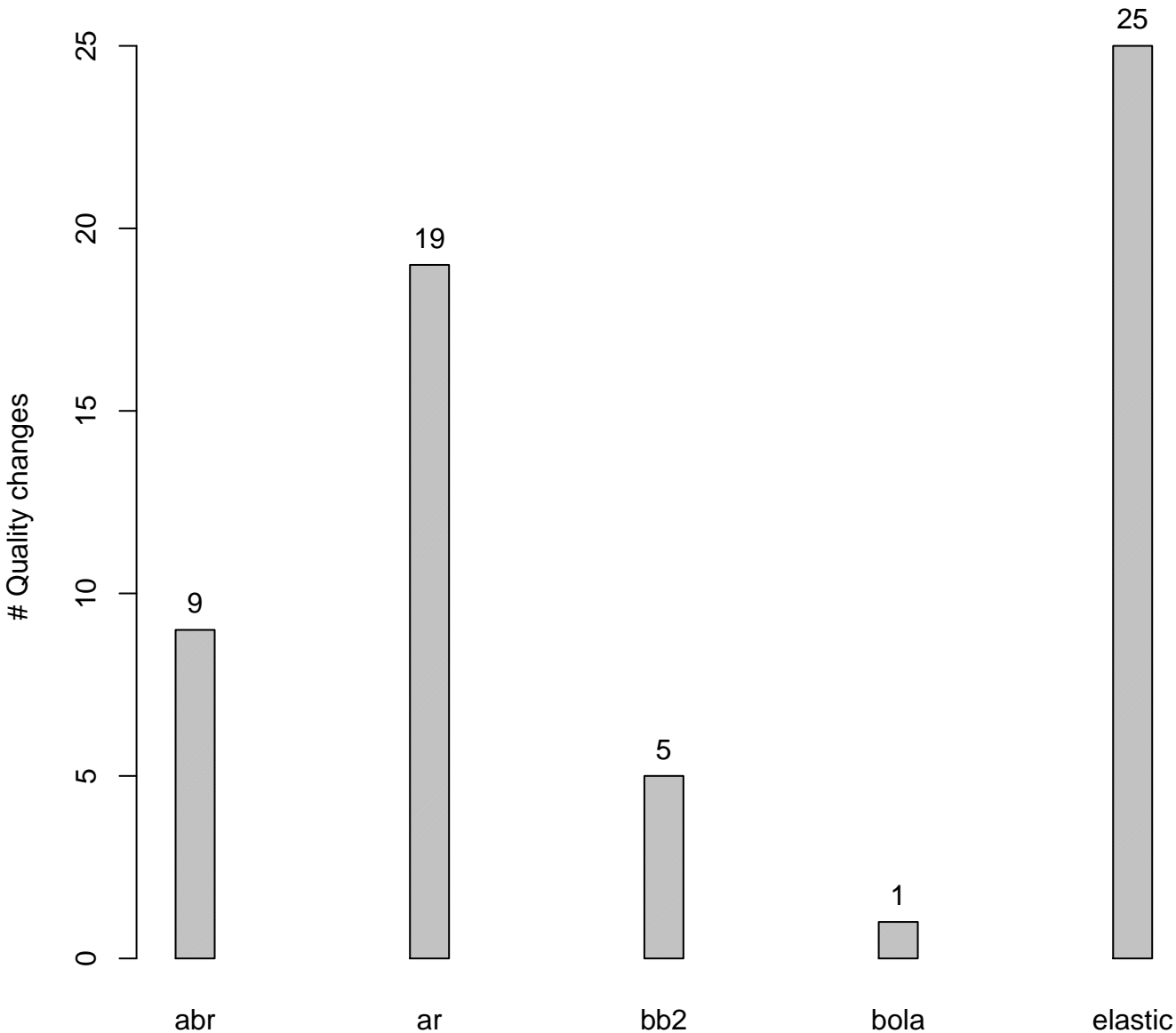
Network profile: p3 Sample: t5 Metric: Inefficiency
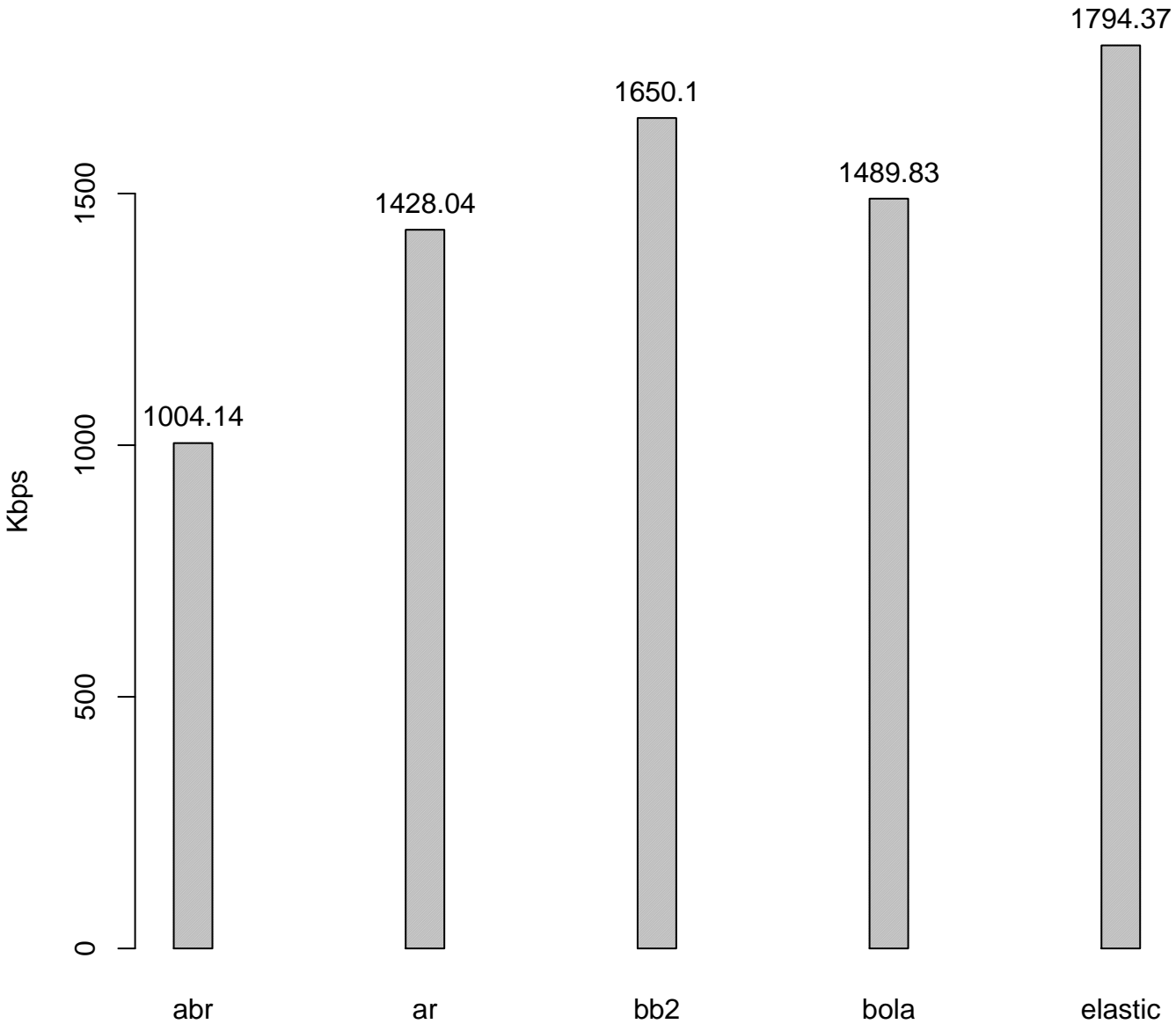**Buffer: 120 min: elastic**

Network profile: p3 Sample: t5 Metric: # quality change Buffer: 120 min: bb2

Network profile: p3 Sample: t6 Metric: Avg−Bitrate
Buffer: 120 max: bb2

Network profile: p3 Sample: t6 Metric: Inefficiency
Buffer: 120 min: elastic

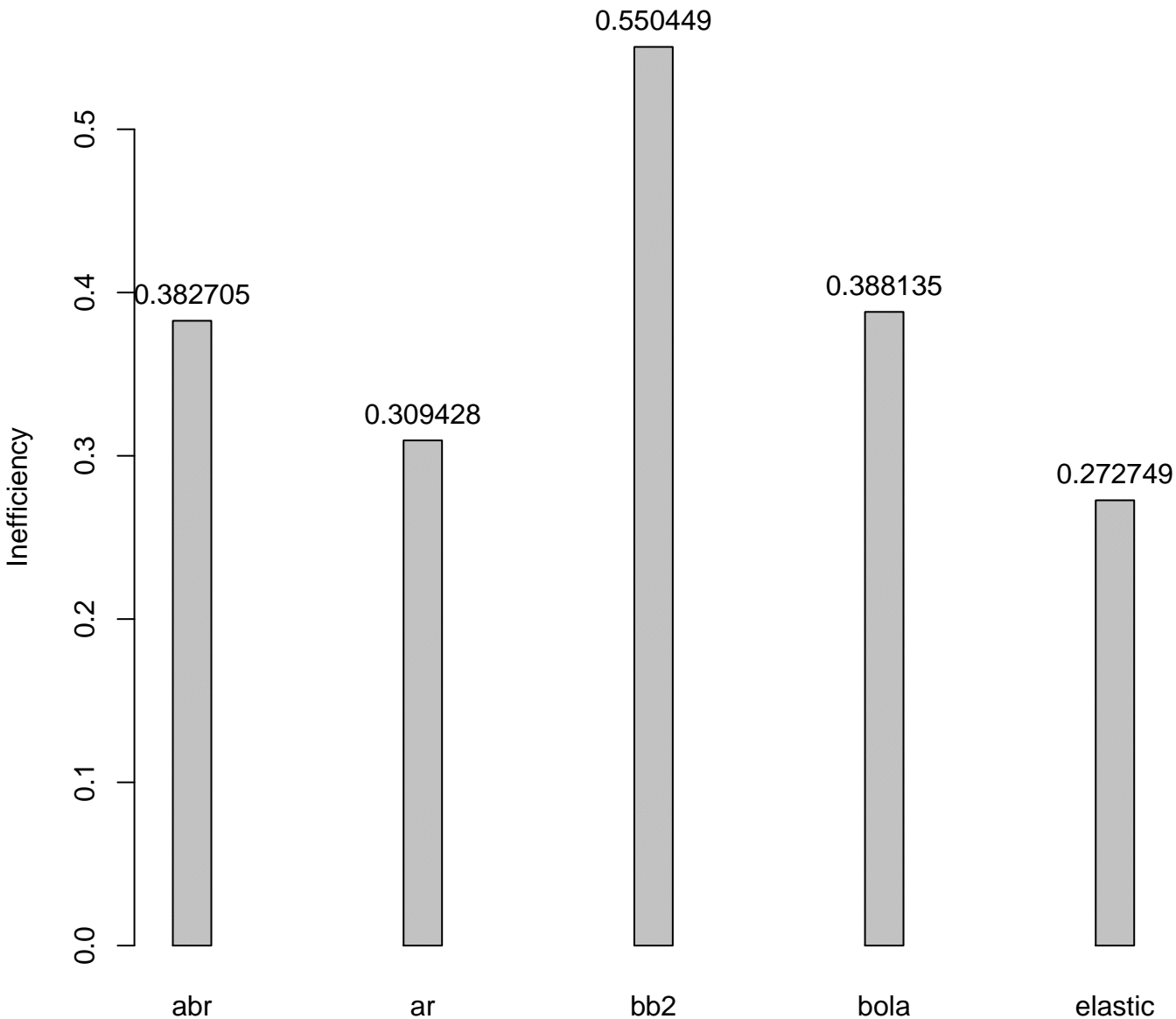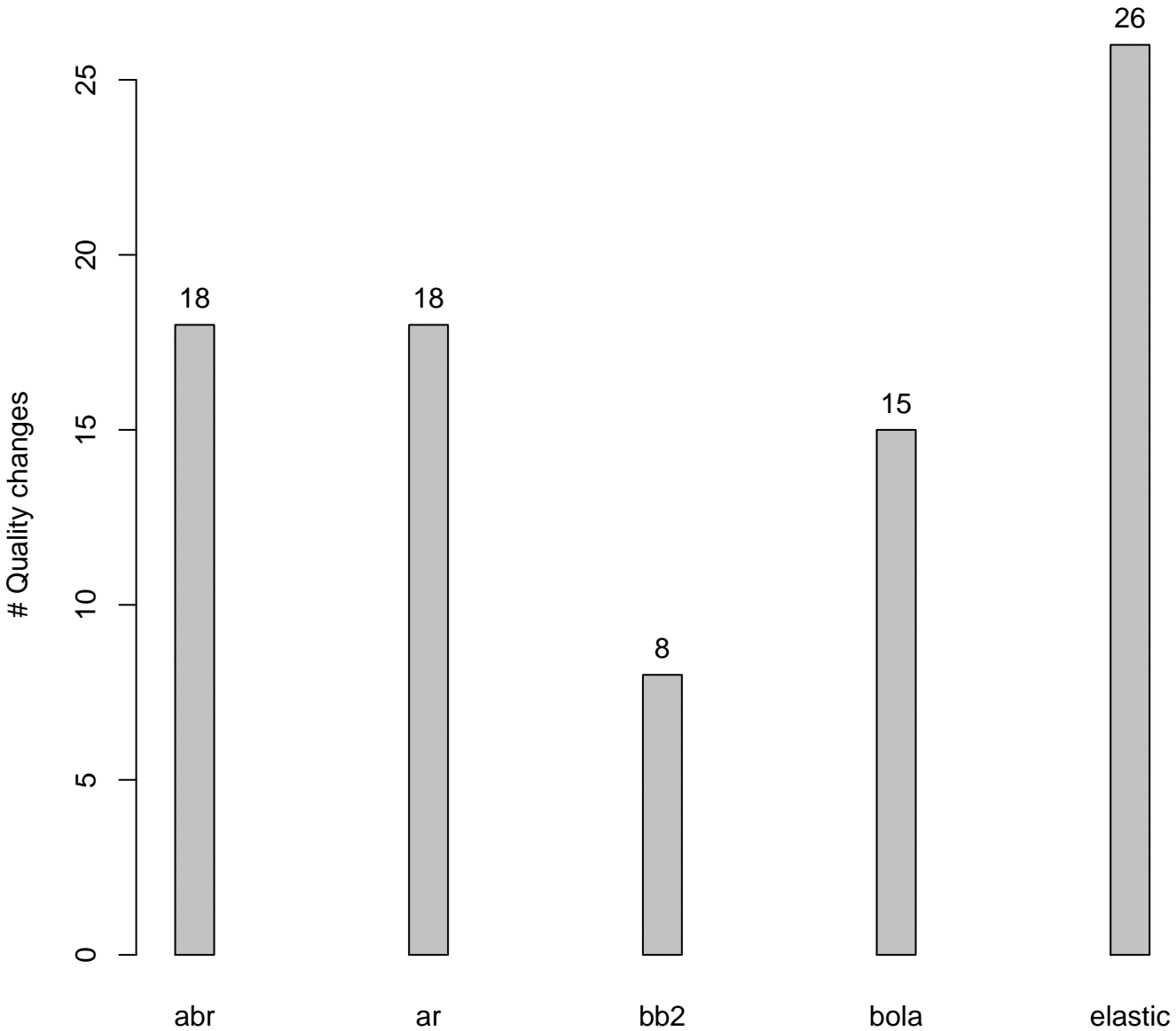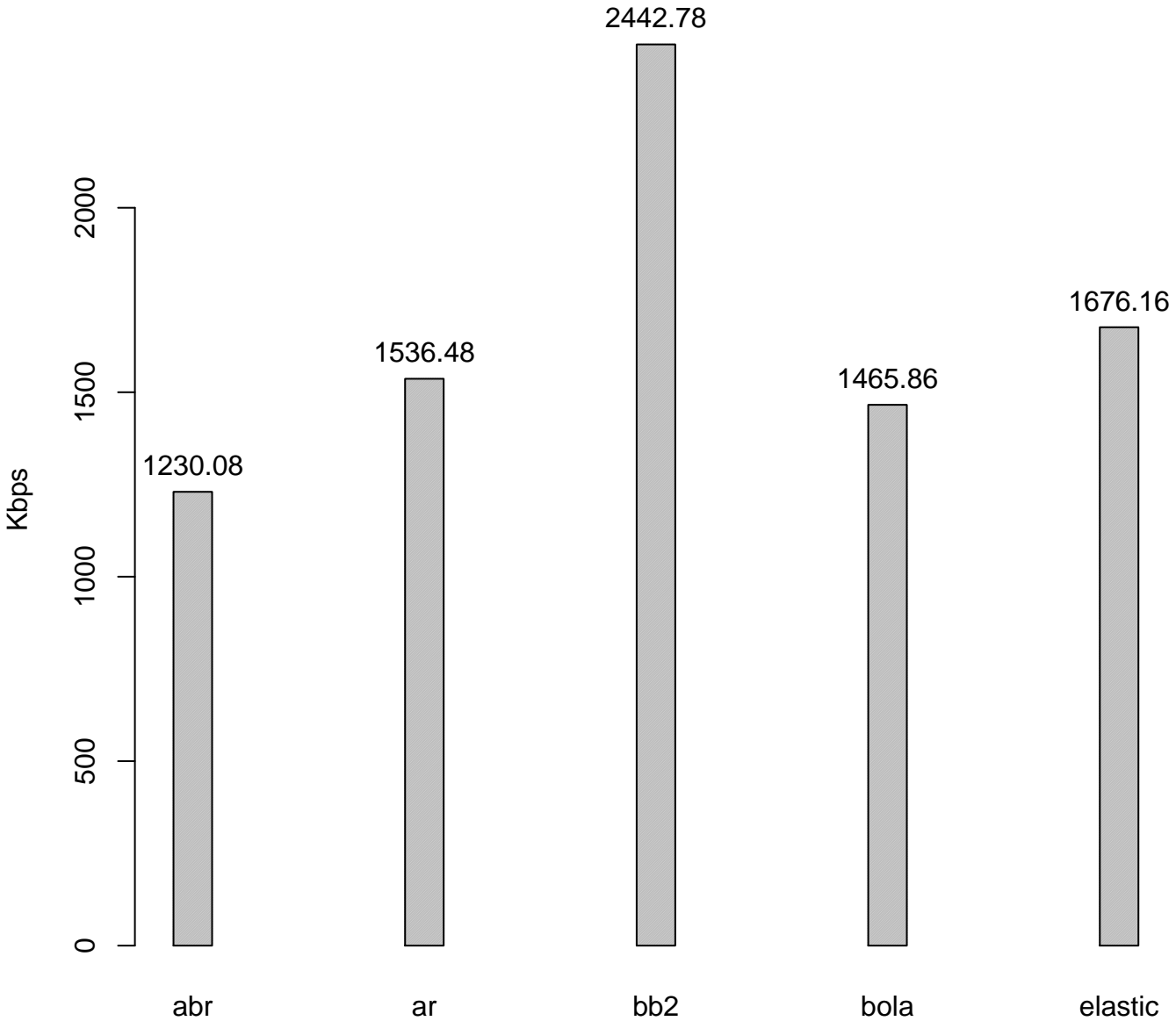**Network profile: p3 Sample: t6 Metric: # quality change Buffer: 120 min: bb2**
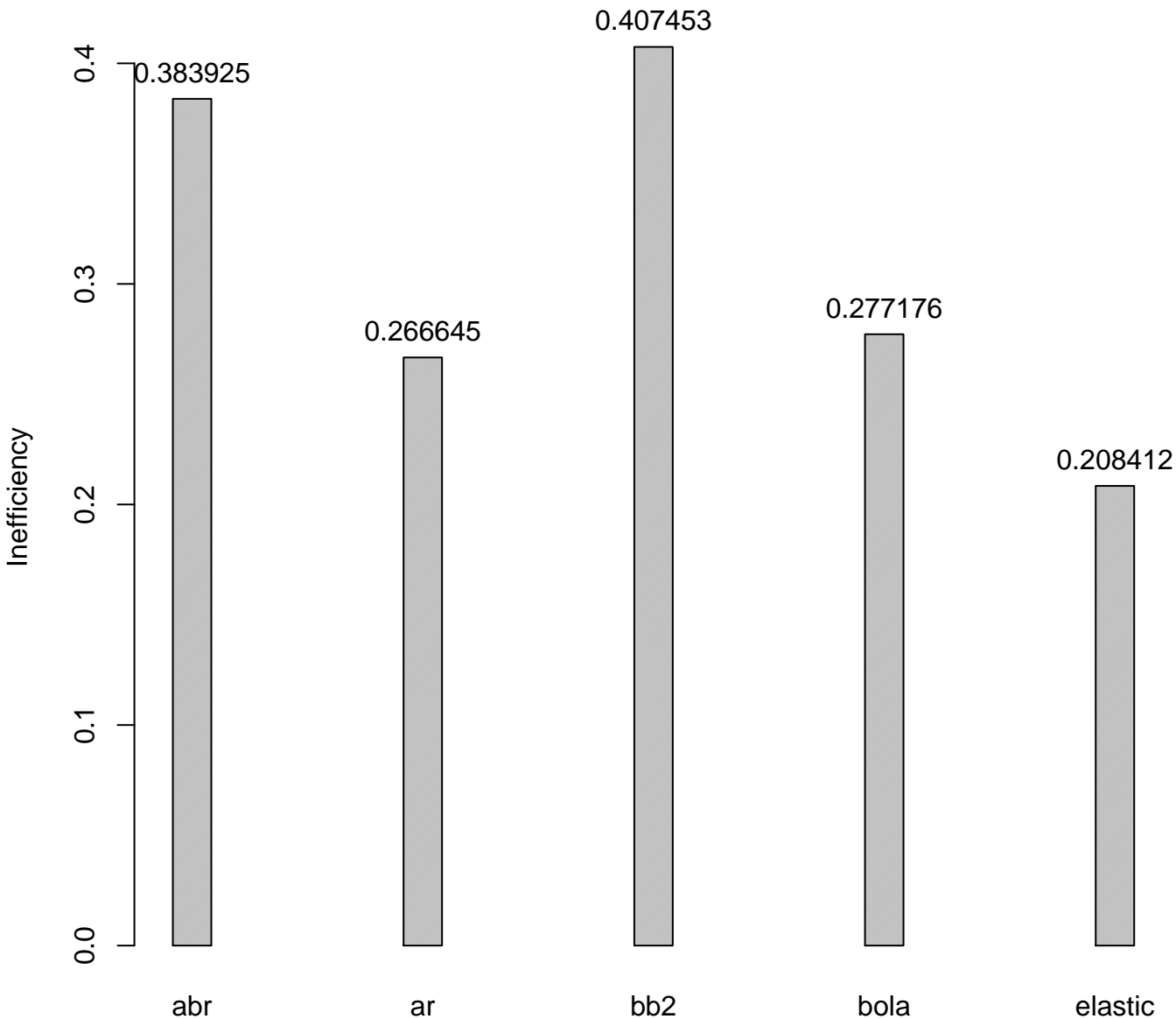
Network profile: p3 Sample: t7 Metric: Avg−Bitrate
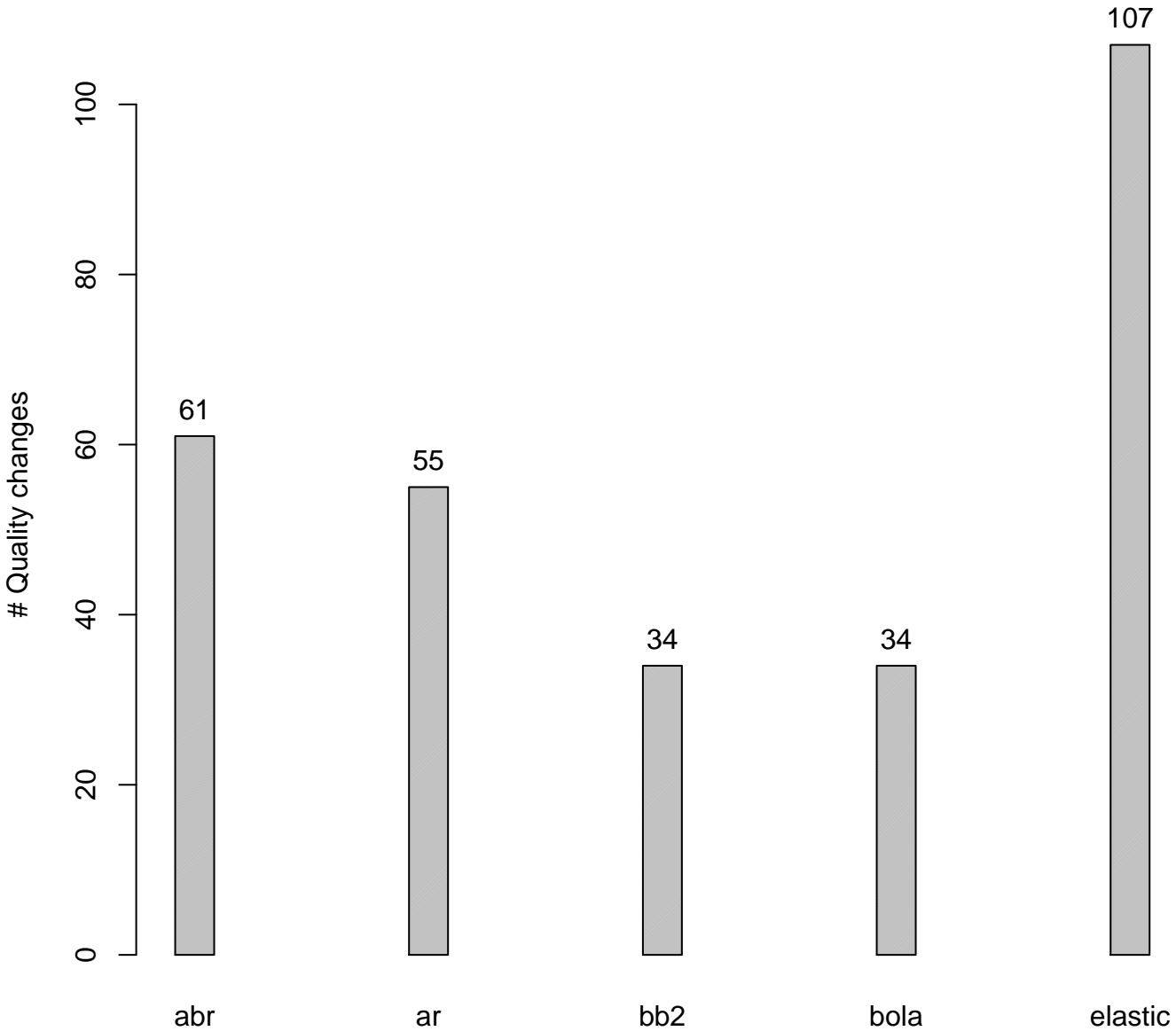**Buffer: 120 max: bb2**

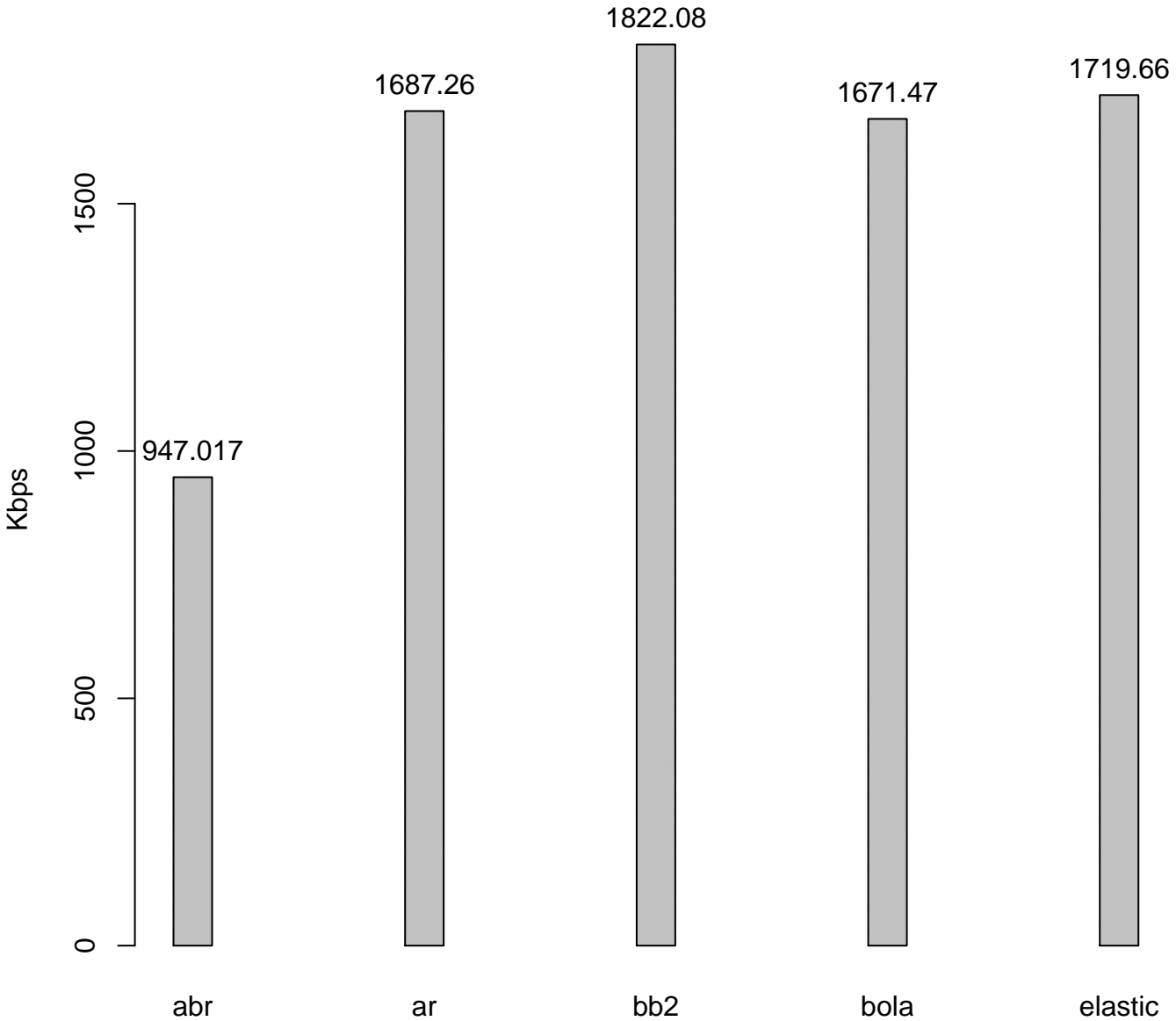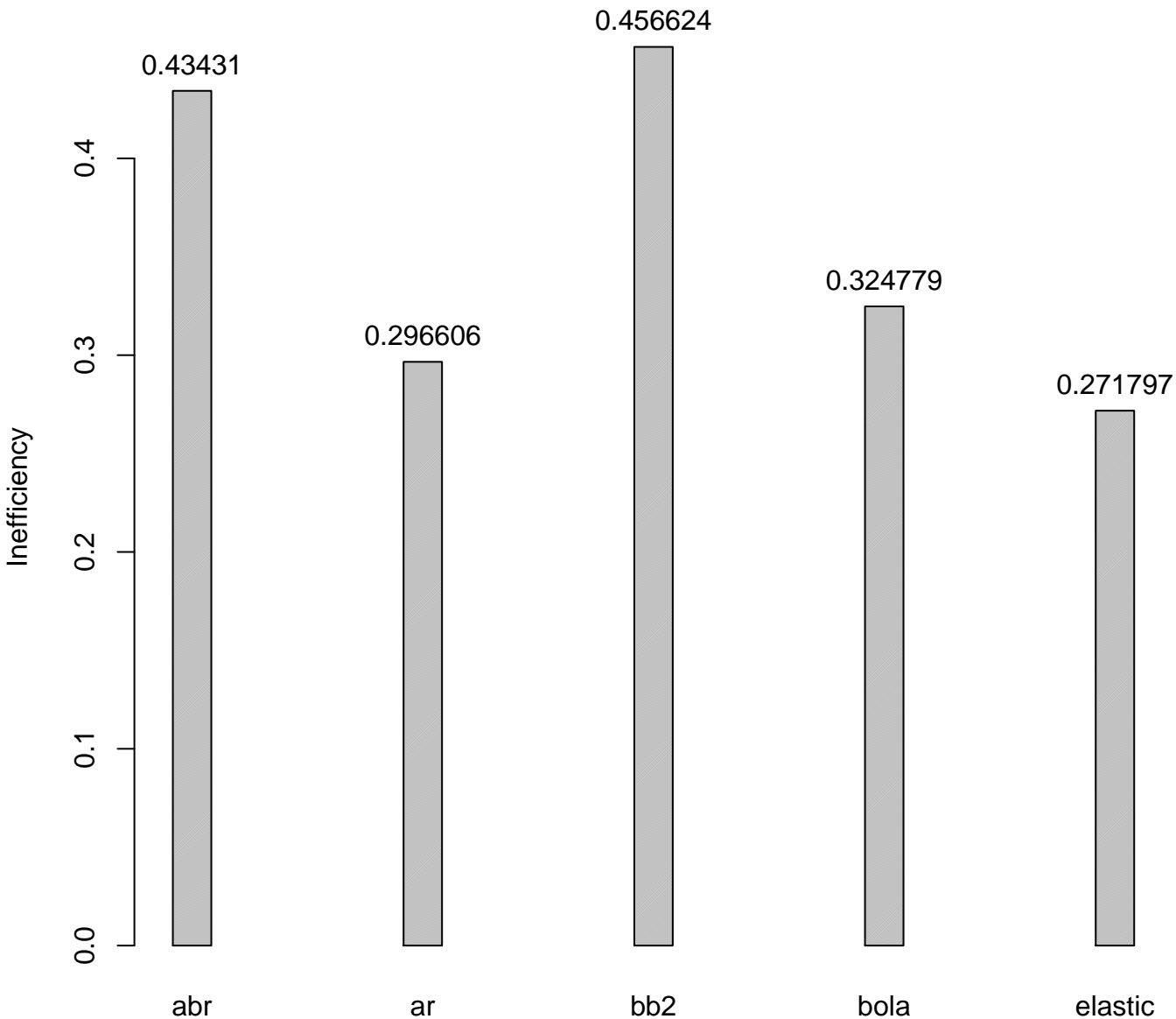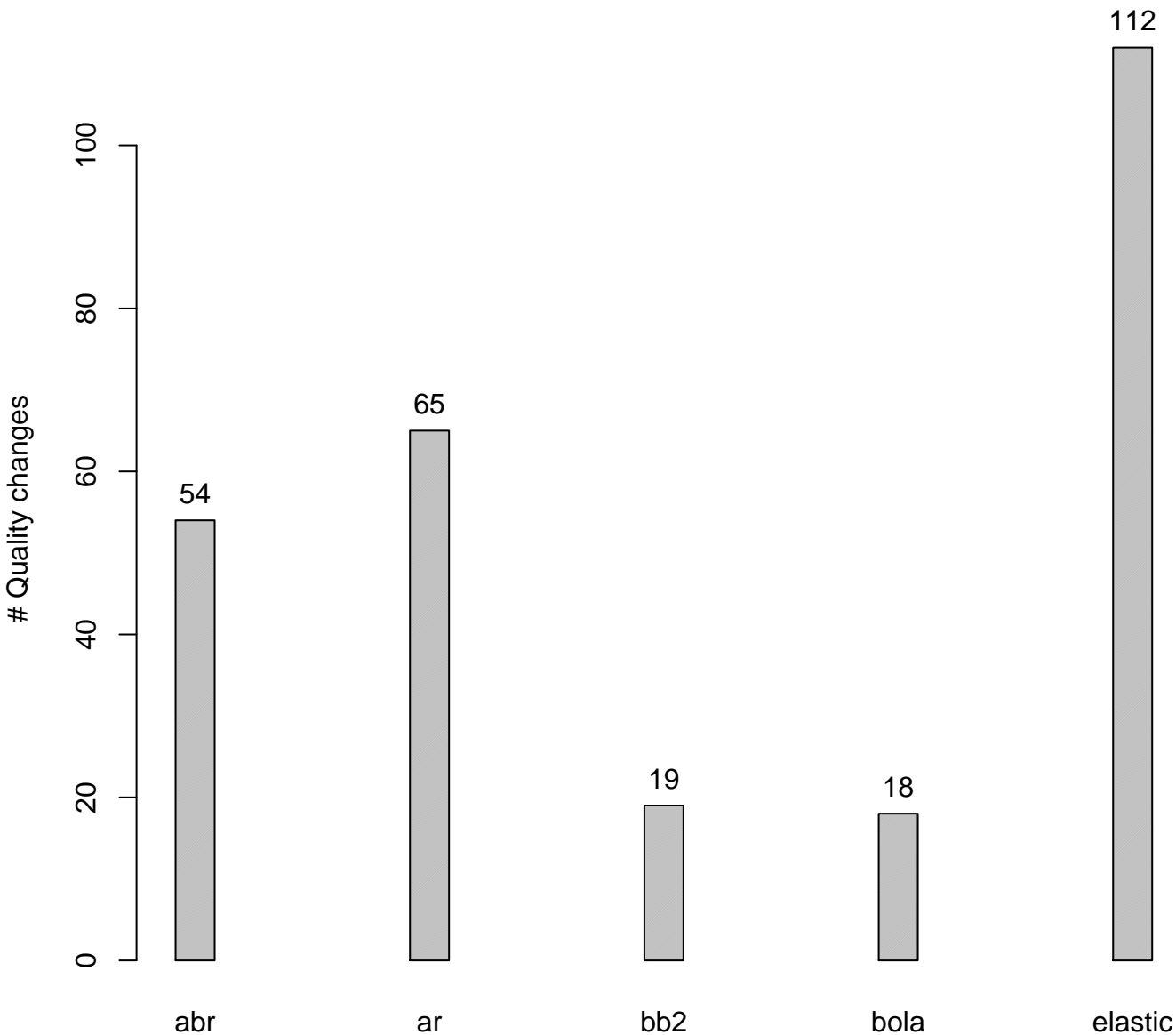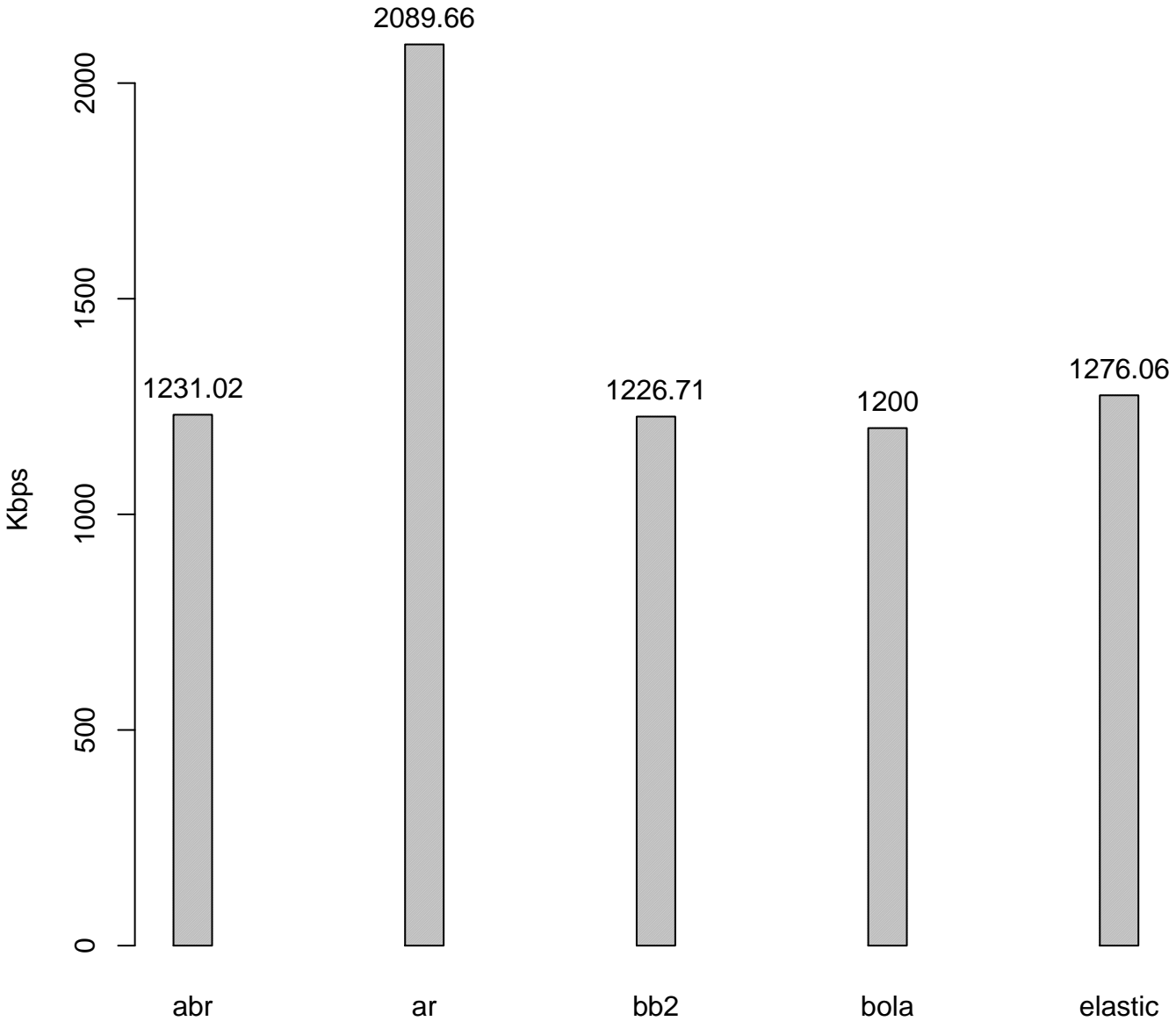**Network profile: p3 Sample: t7 Metric: Inefficiency**
Buffer: 120 min: elastic

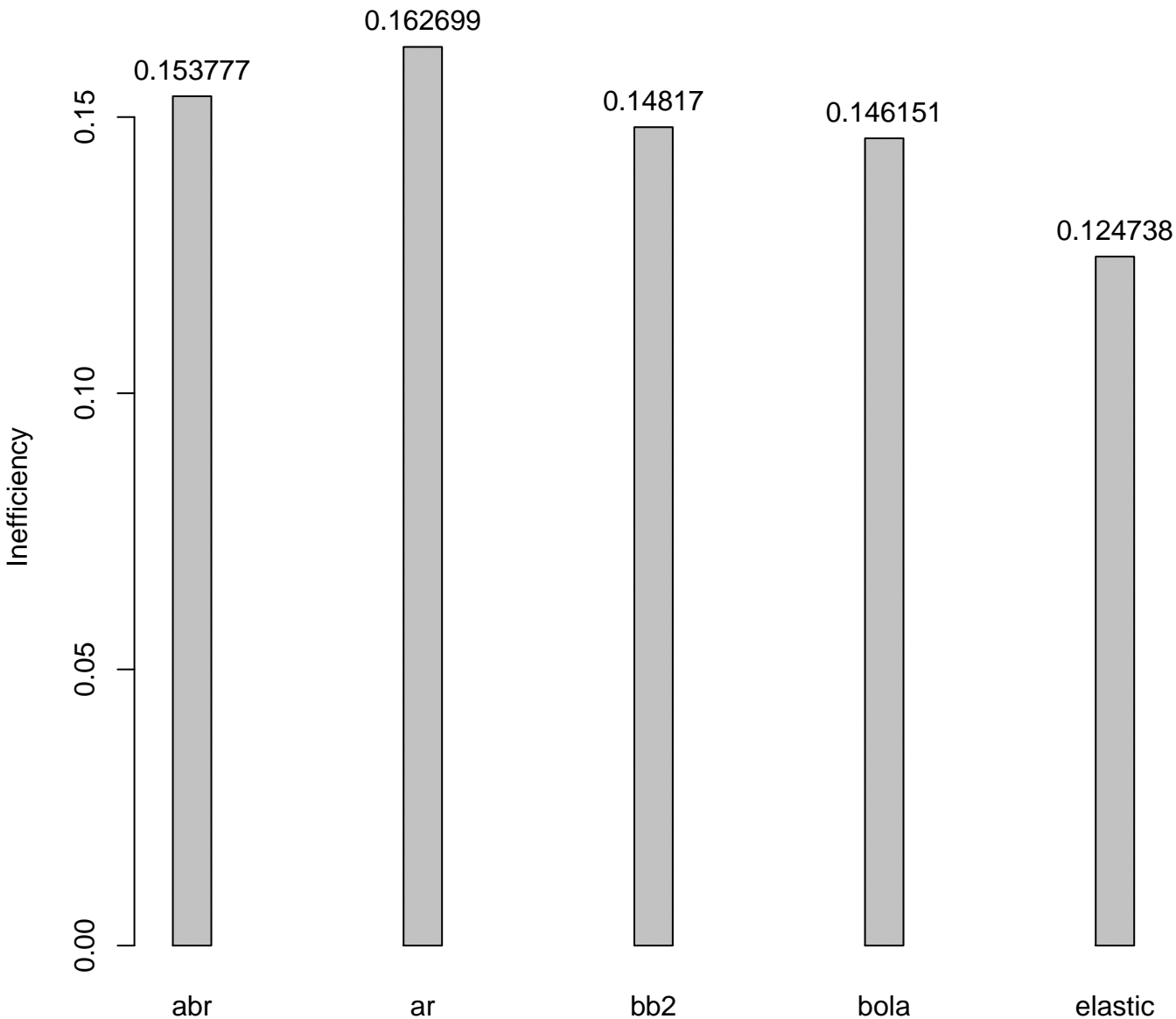**Network profile: p3 Sample: t7 Metric: # quality change**
Buffer: 120 min: bola

Network profile: p4 Sample: t1 Metric: Avg−Bitrate
Buffer: 120 max: ar

Network profile: p4 Sample: t1 Metric: Inefficiency
Buffer: 120 min: elastic

Network profile: p4 Sample: t1 Metric: # quality change Buffer: 120 min: bola

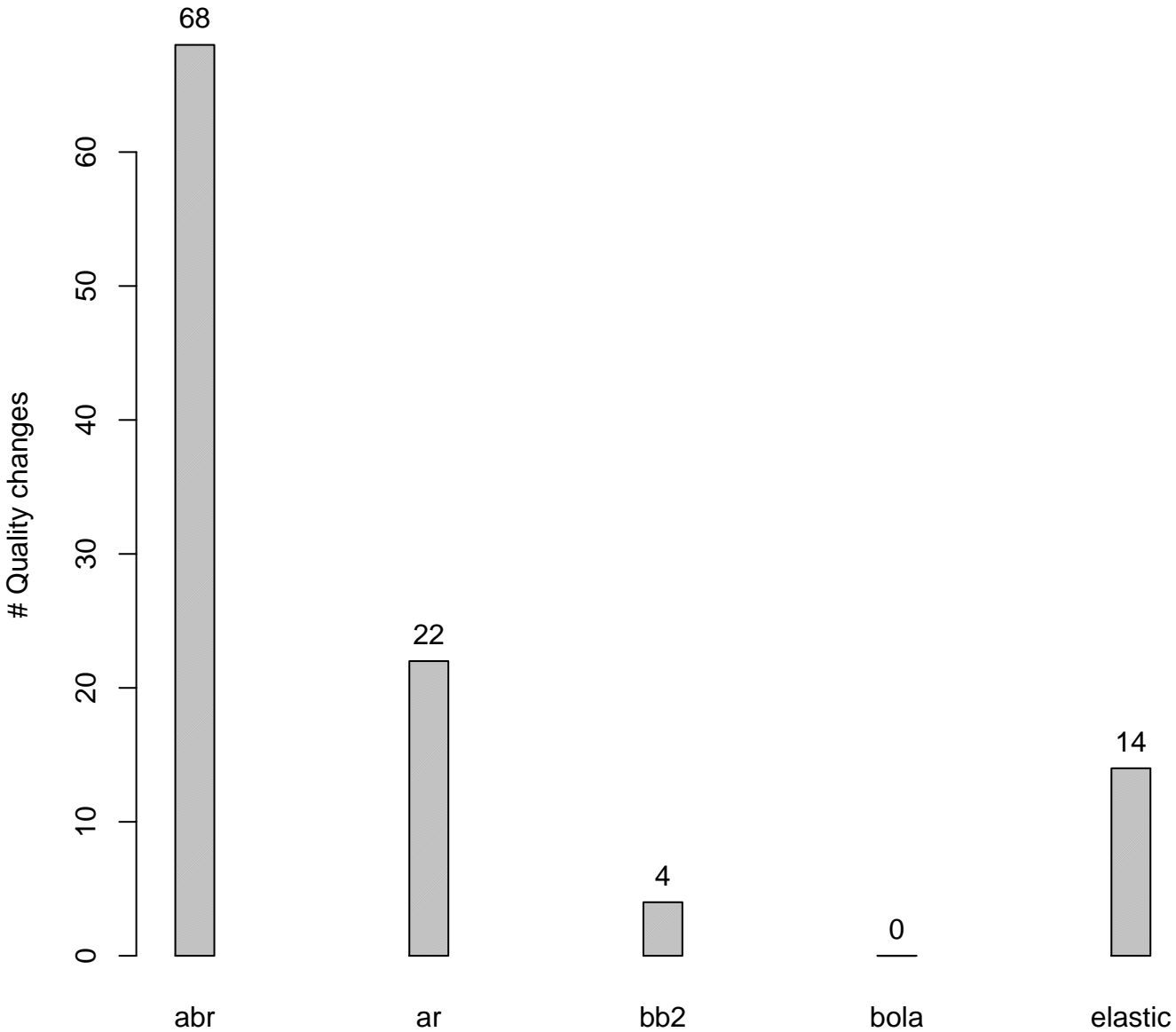**Network profile: p4 Sample: t2 Metric: Avg−Bitrate**
Buffer: 120 max: ar

Kbps

2456.64

1907.87

1677.5

1622

1762.94

abr   ar   bb2   bola   elastic
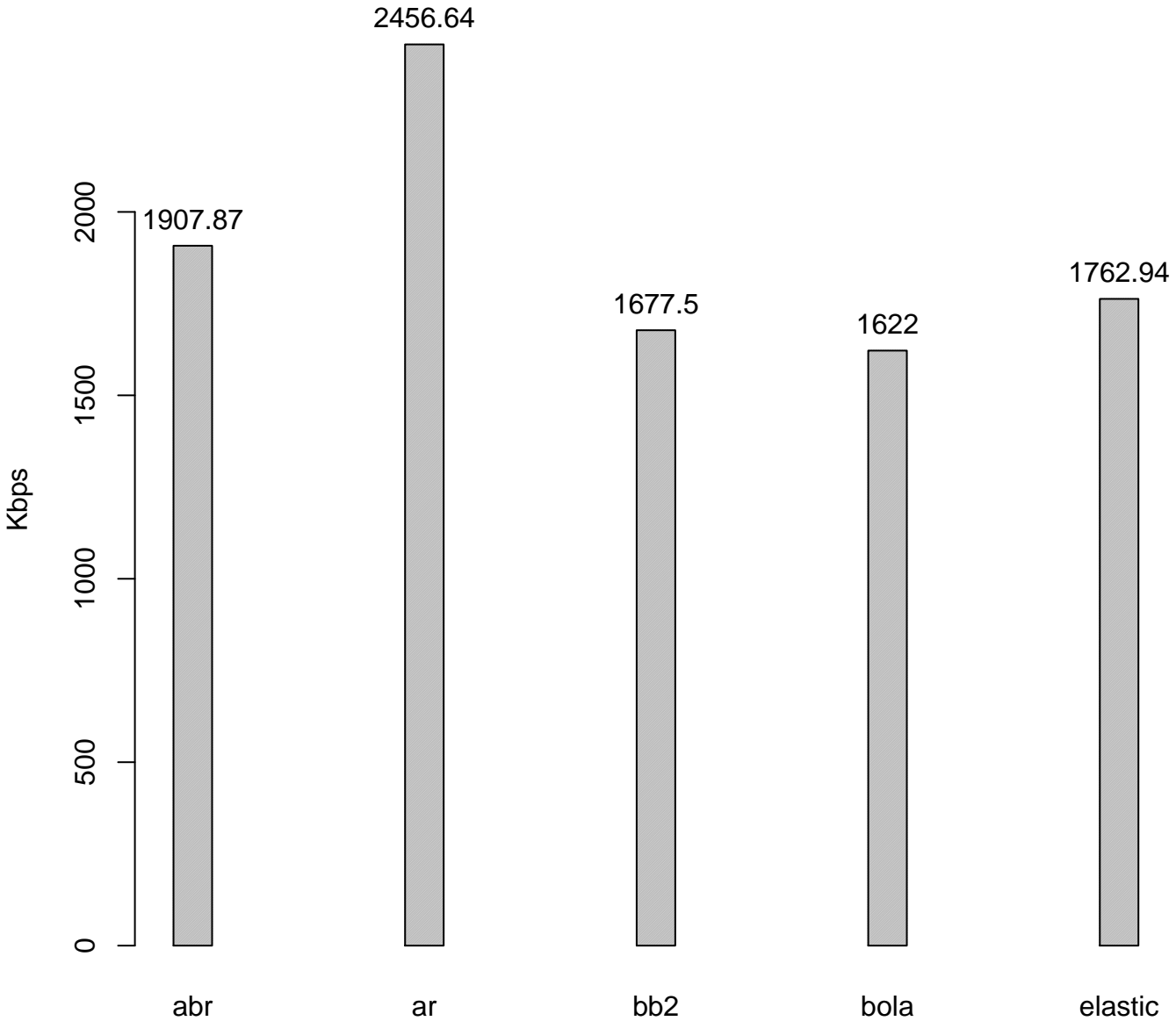
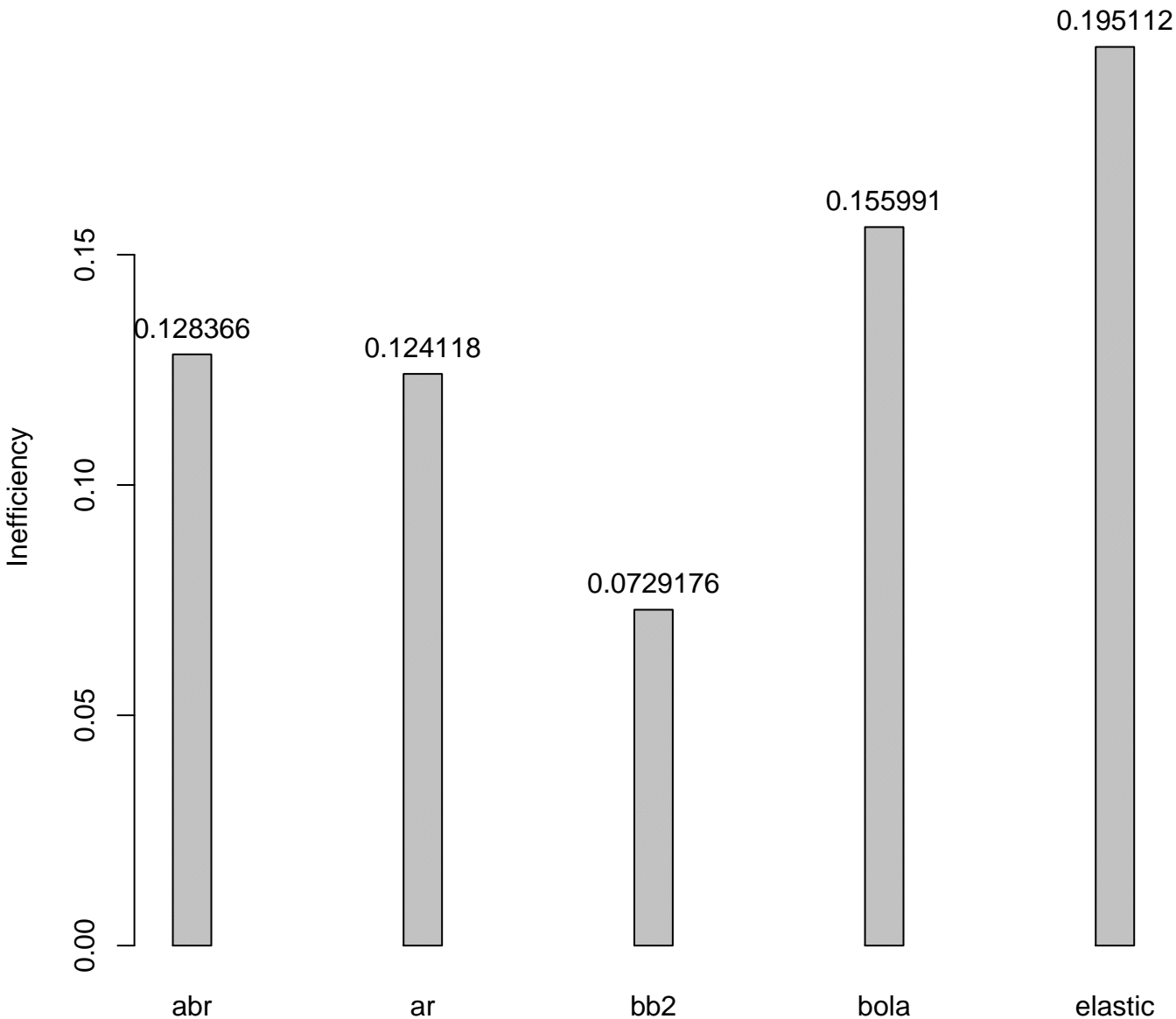**Network profile: p4 Sample: t2 Metric: Inefficiency**
Buffer: 120 min: bb2

Network profile: p4 Sample: t2 Metric: # quality change
Buffer: 120   min: bola

Network profile: p4 Sample: t3 Metric: Avg−Bitrate Buffer: 120 max: ar

Kbps

abr	1602.73
ar	2023.44
bb2	1591.07
bola	1301.59
elastic	1698.96

Network profile: p4 Sample: t3 Metric: Inefficiency
Buffer: 120 min: bb2

Network profile: p4 Sample: t3 Metric: # quality change
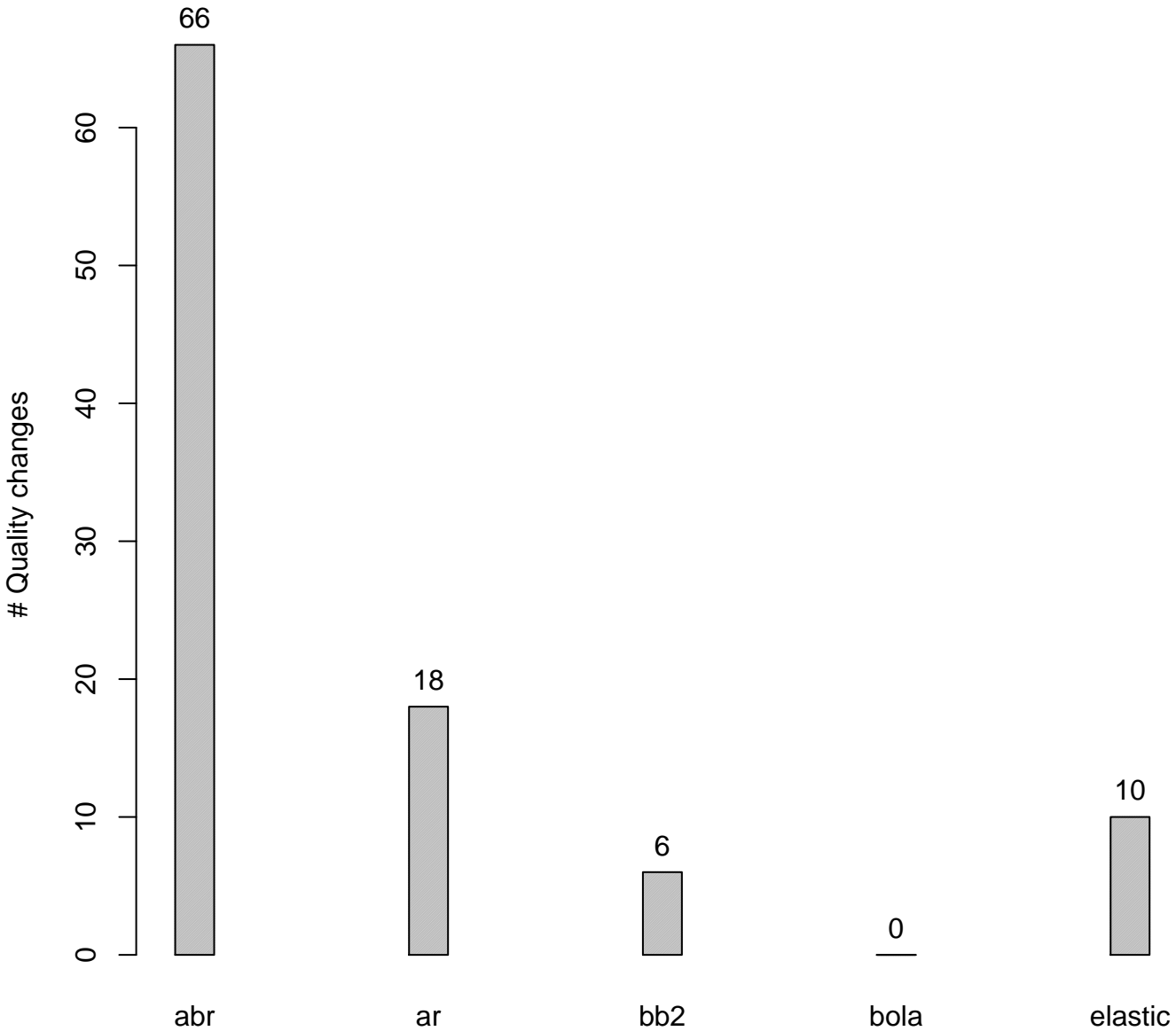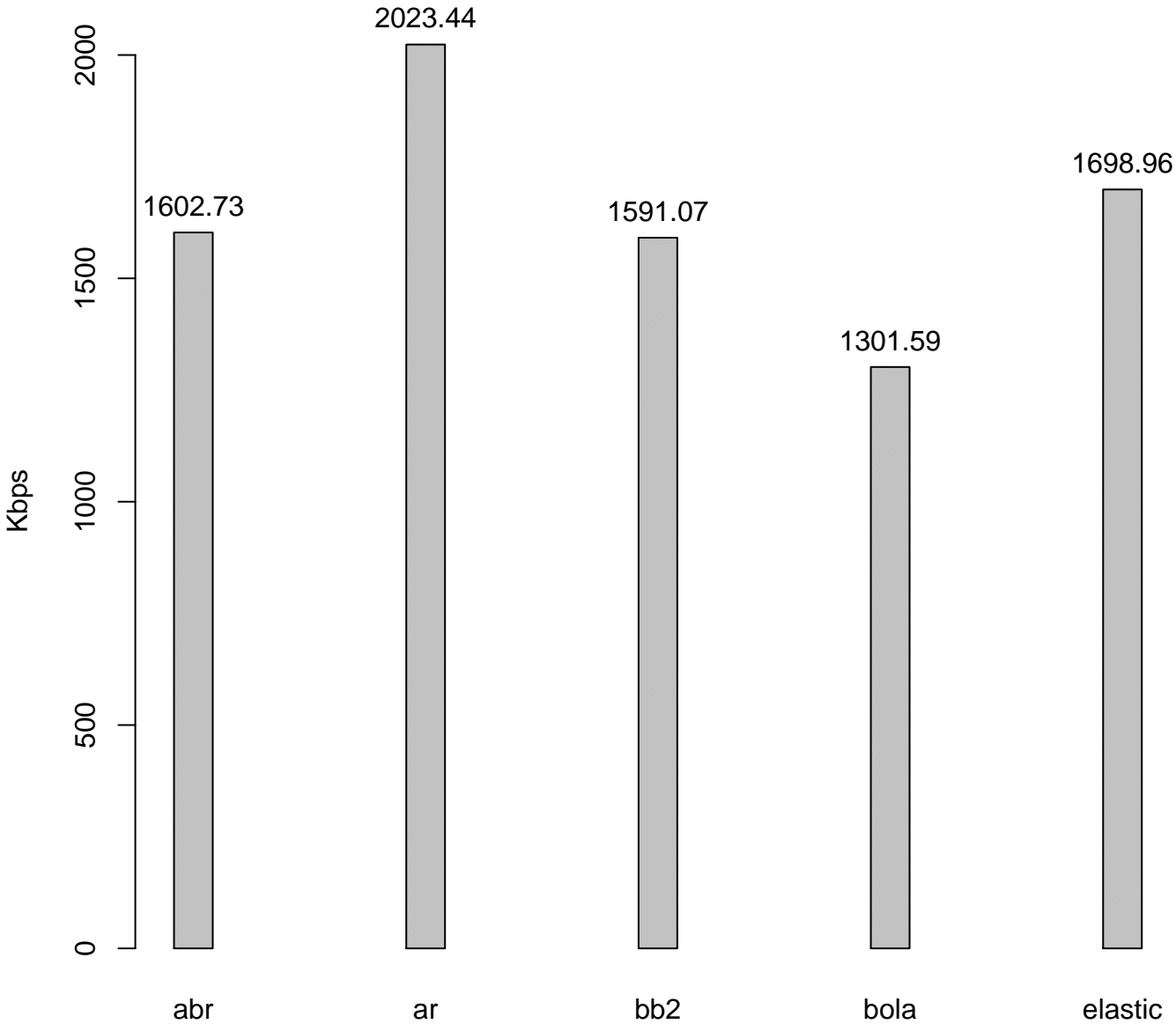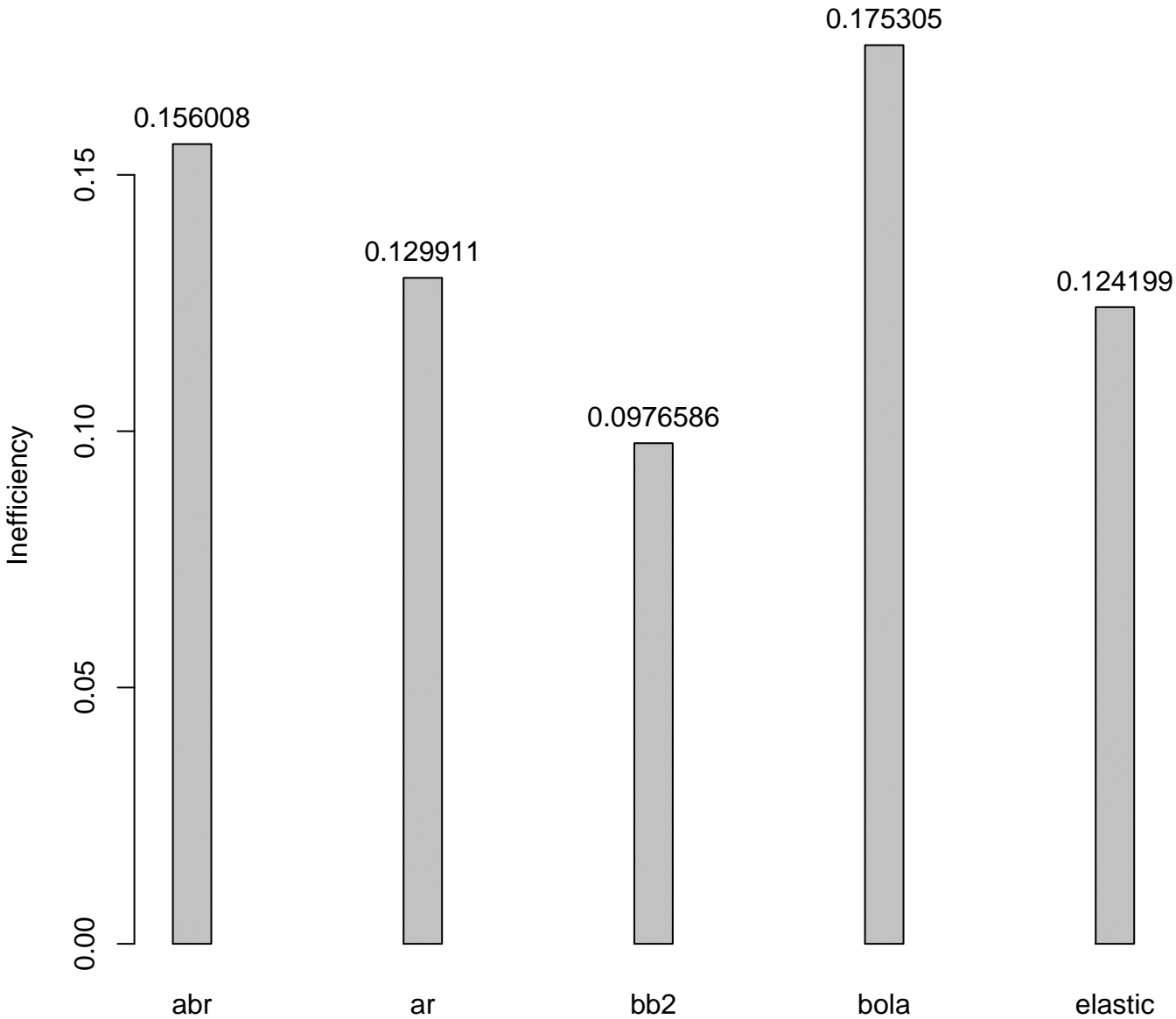## Buffer: 120   min: bola

**Network profile: p4 Sample: t4 Metric: Avg−Bitrate
Buffer: 120 max: ar**

Kbps

1815.1

1444.01

1461.76

1221.85

1143

abr   ar   bb2   bola   elastic

Network profile: p4 Sample: t4 Metric: Inefficiency
Buffer: 120 min: bb2

Inefficiency values by method: abr 0.142689, ar 0.134442, bb2 0.0939306, bola 0.160361, elastic 0.0967904

Network profile: p4 Sample: t4 Metric: # quality change
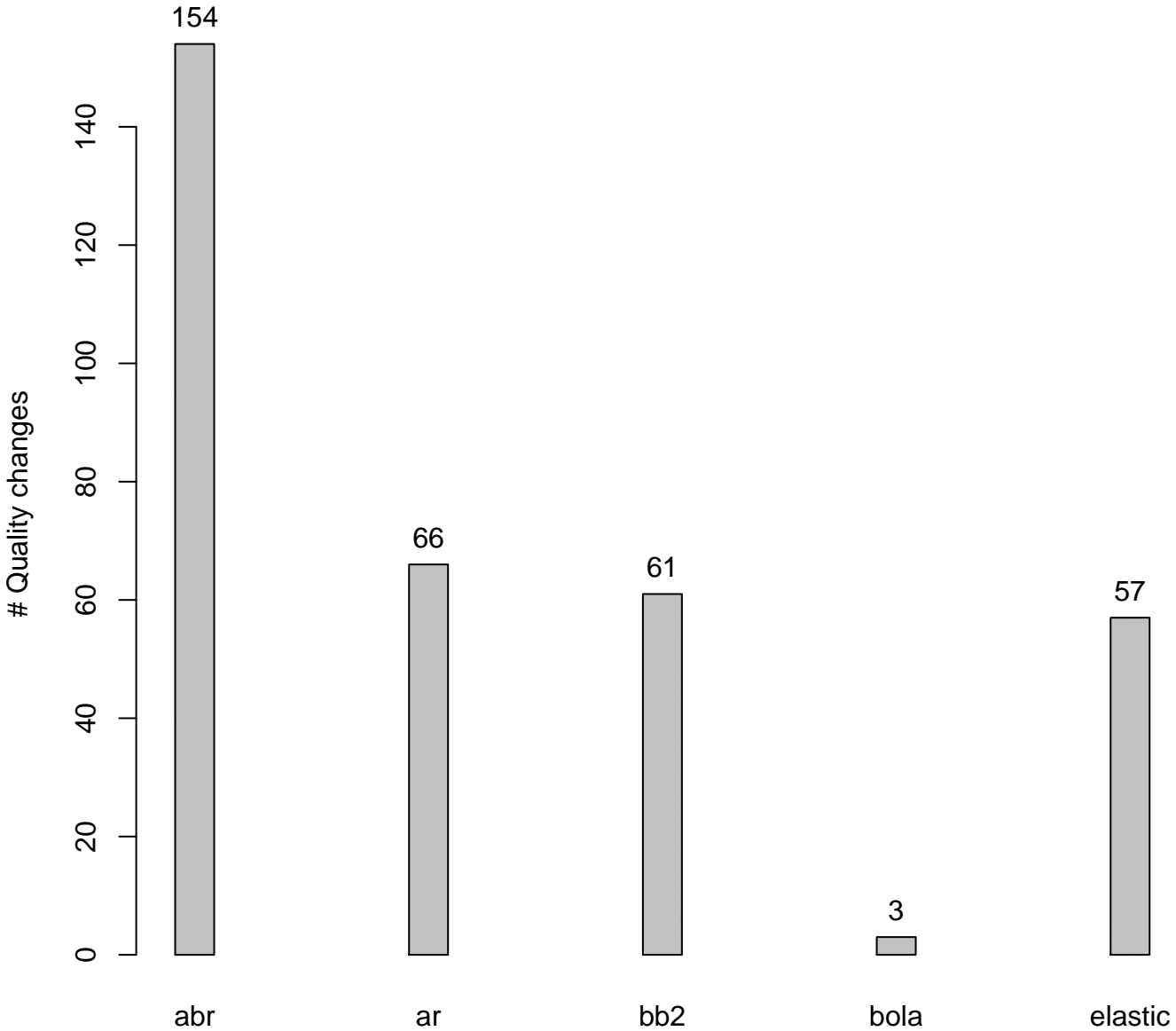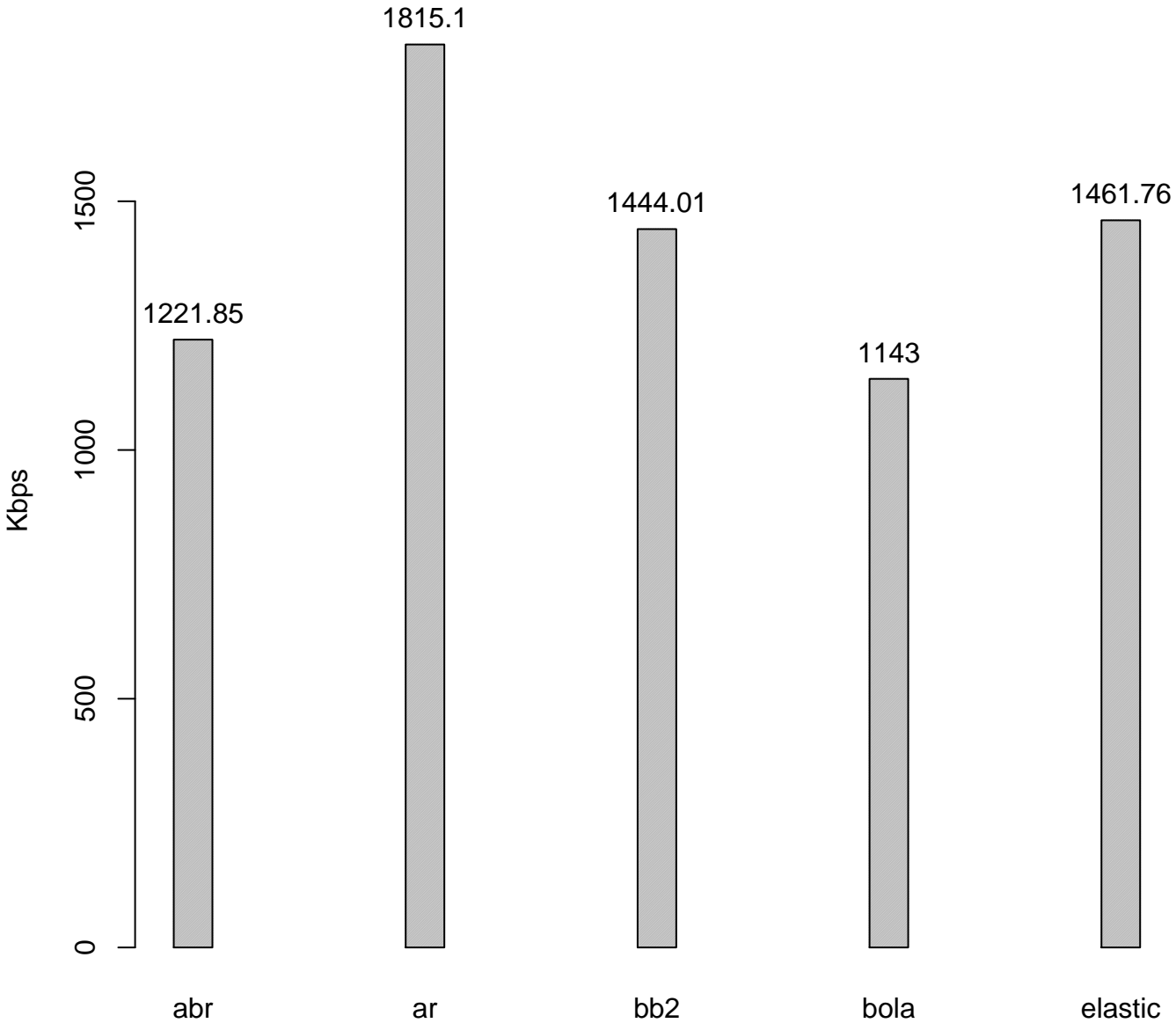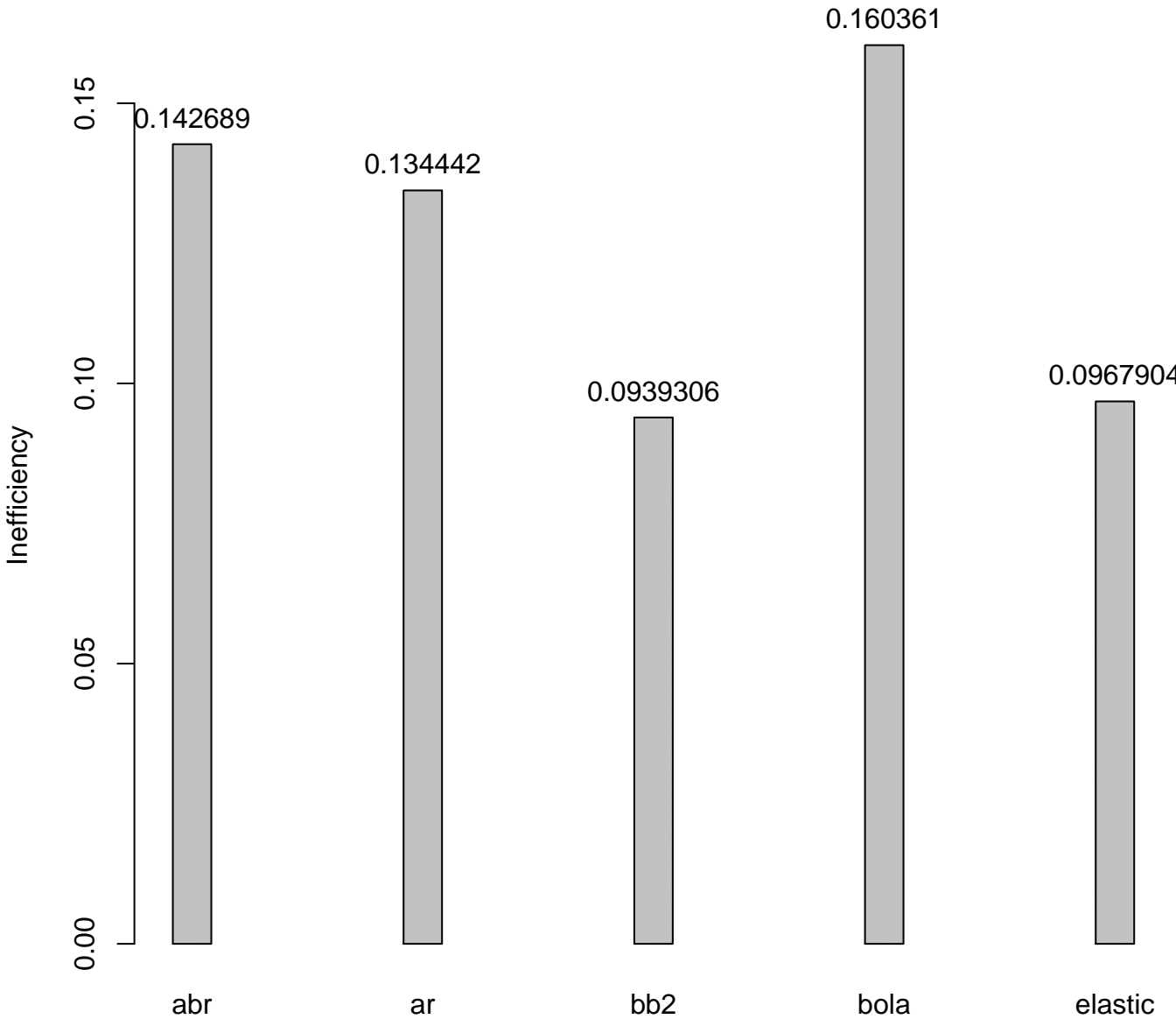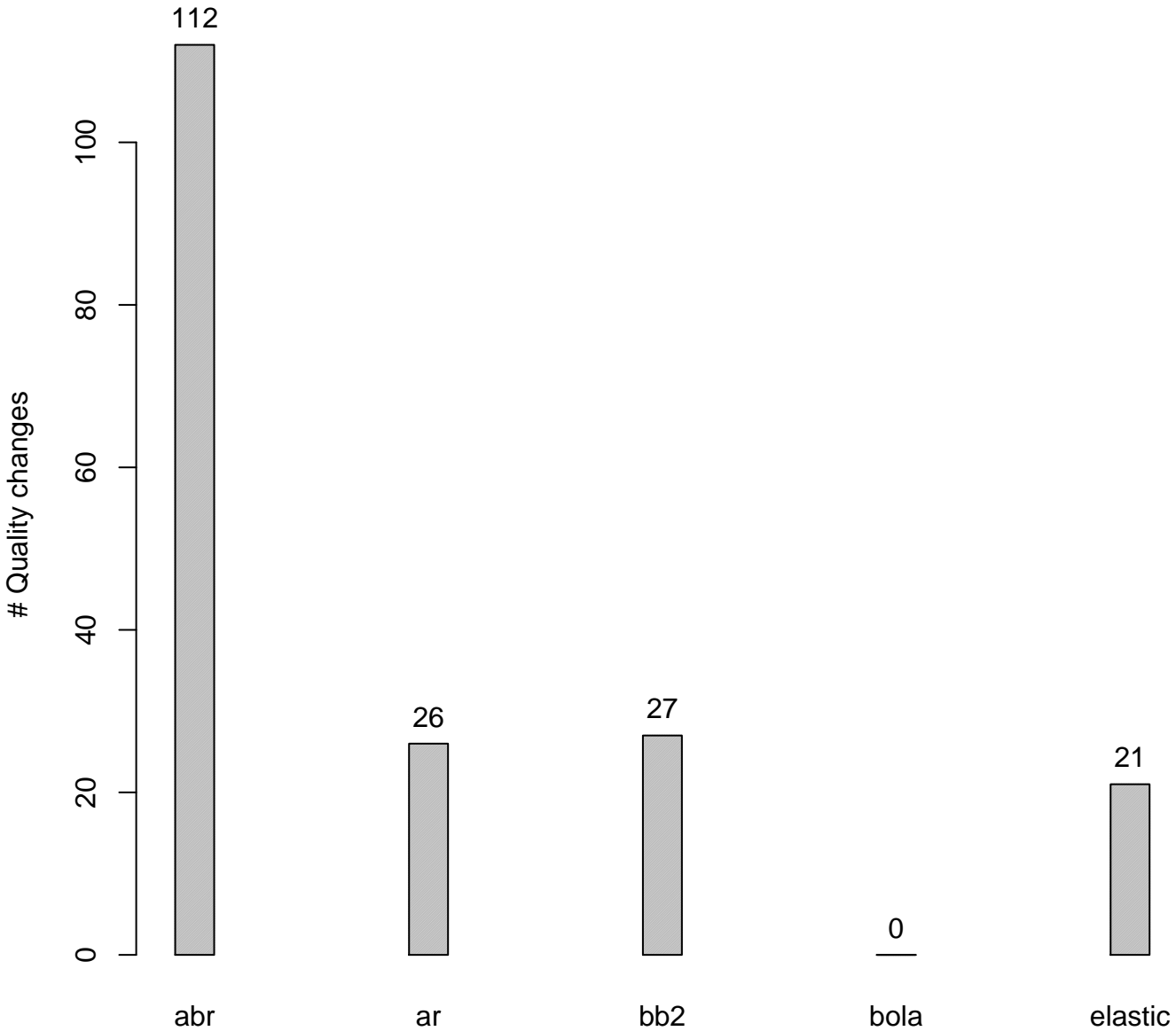**Buffer: 120   min: bola**

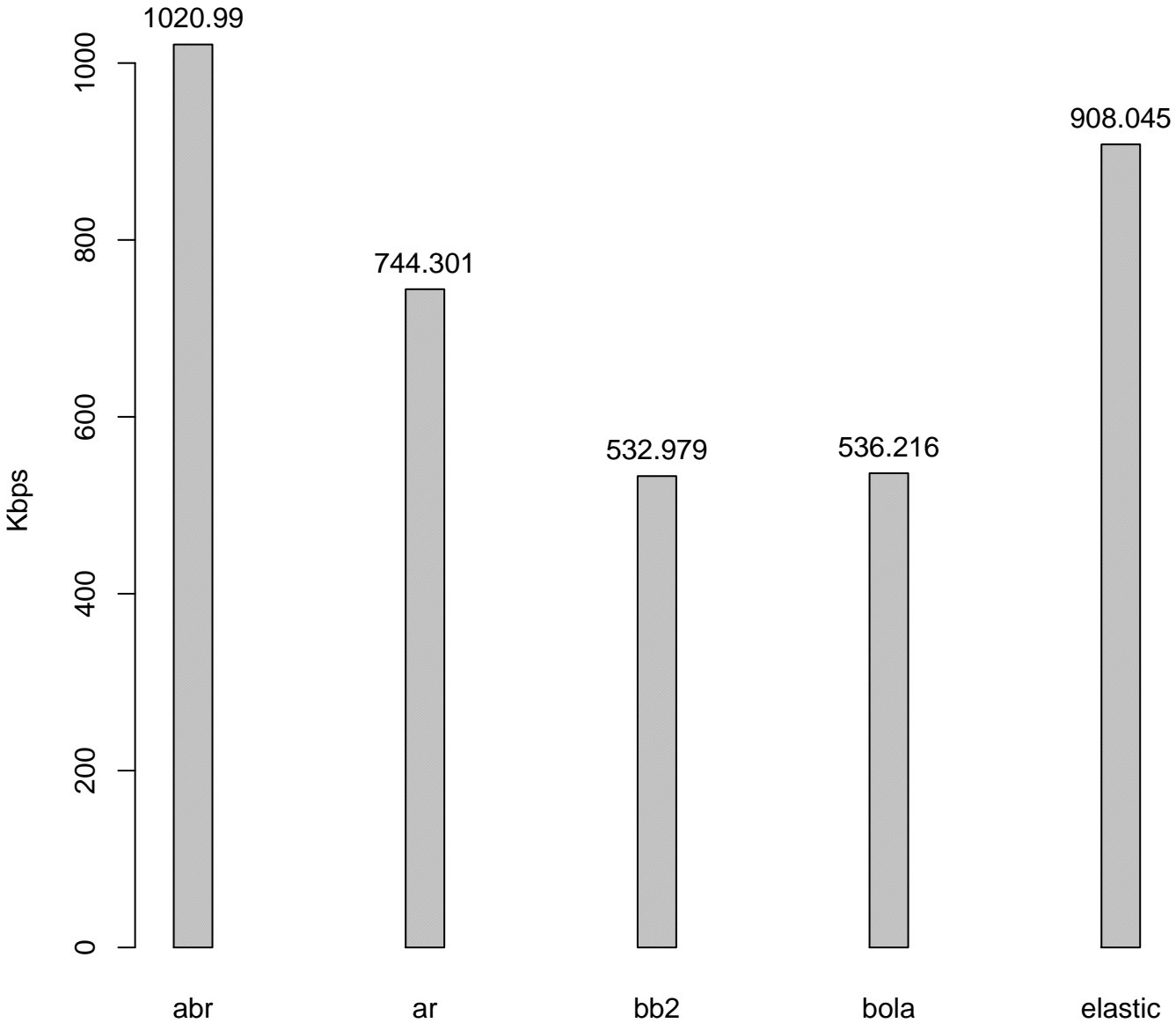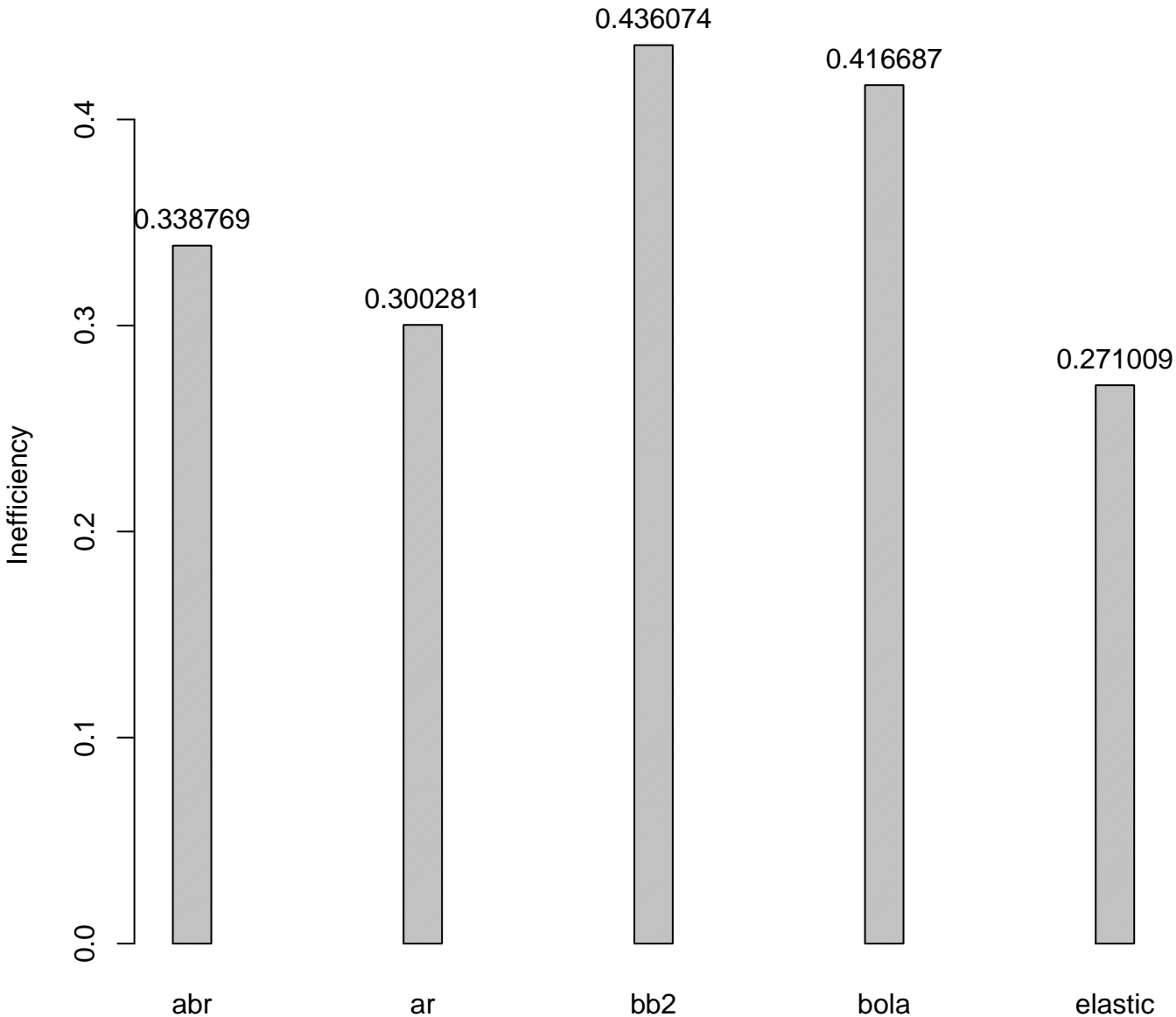**Network profile: p4 Sample: t5 Metric: Avg−Bitrate**
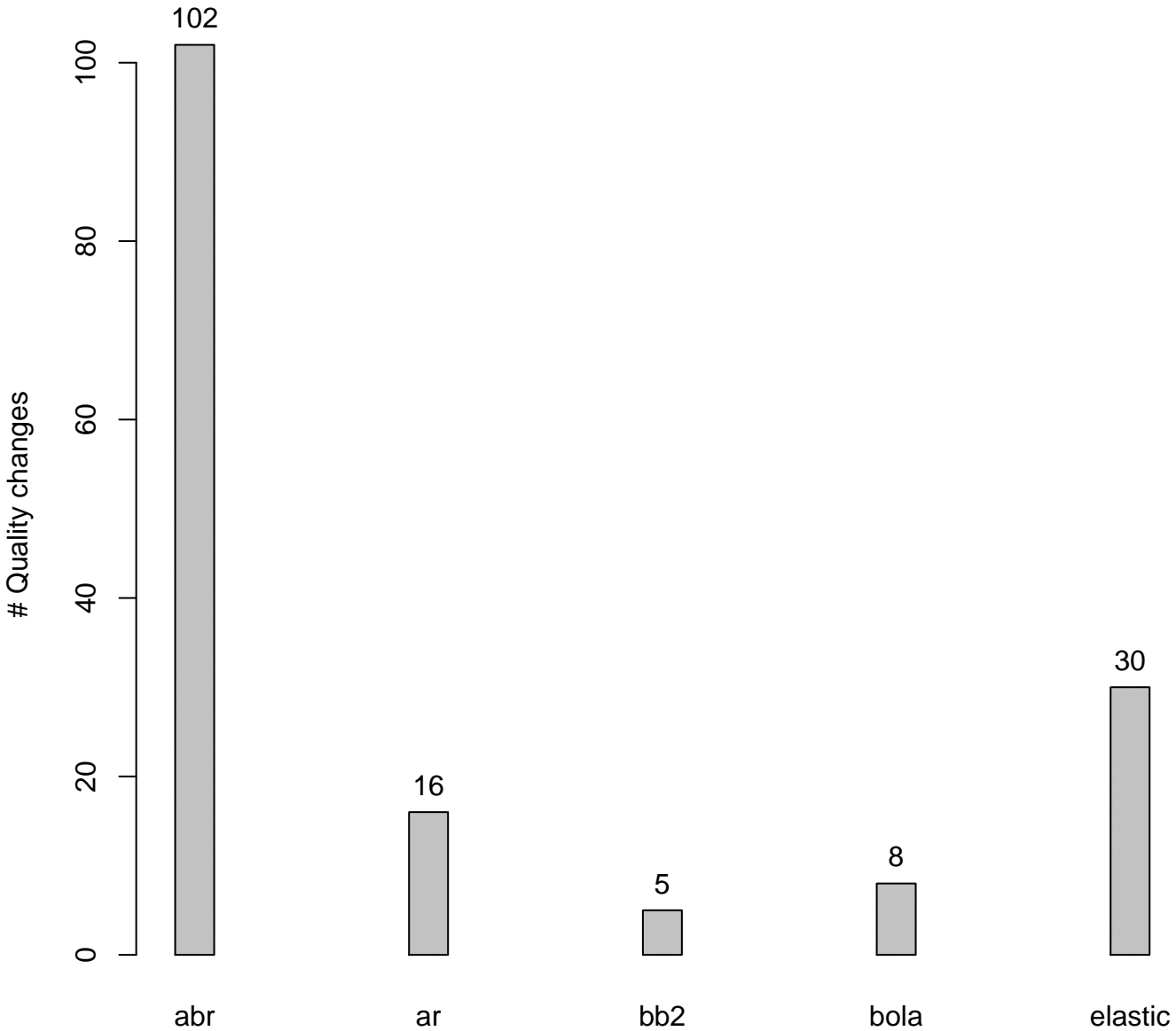**Buffer: 120 max: abr**

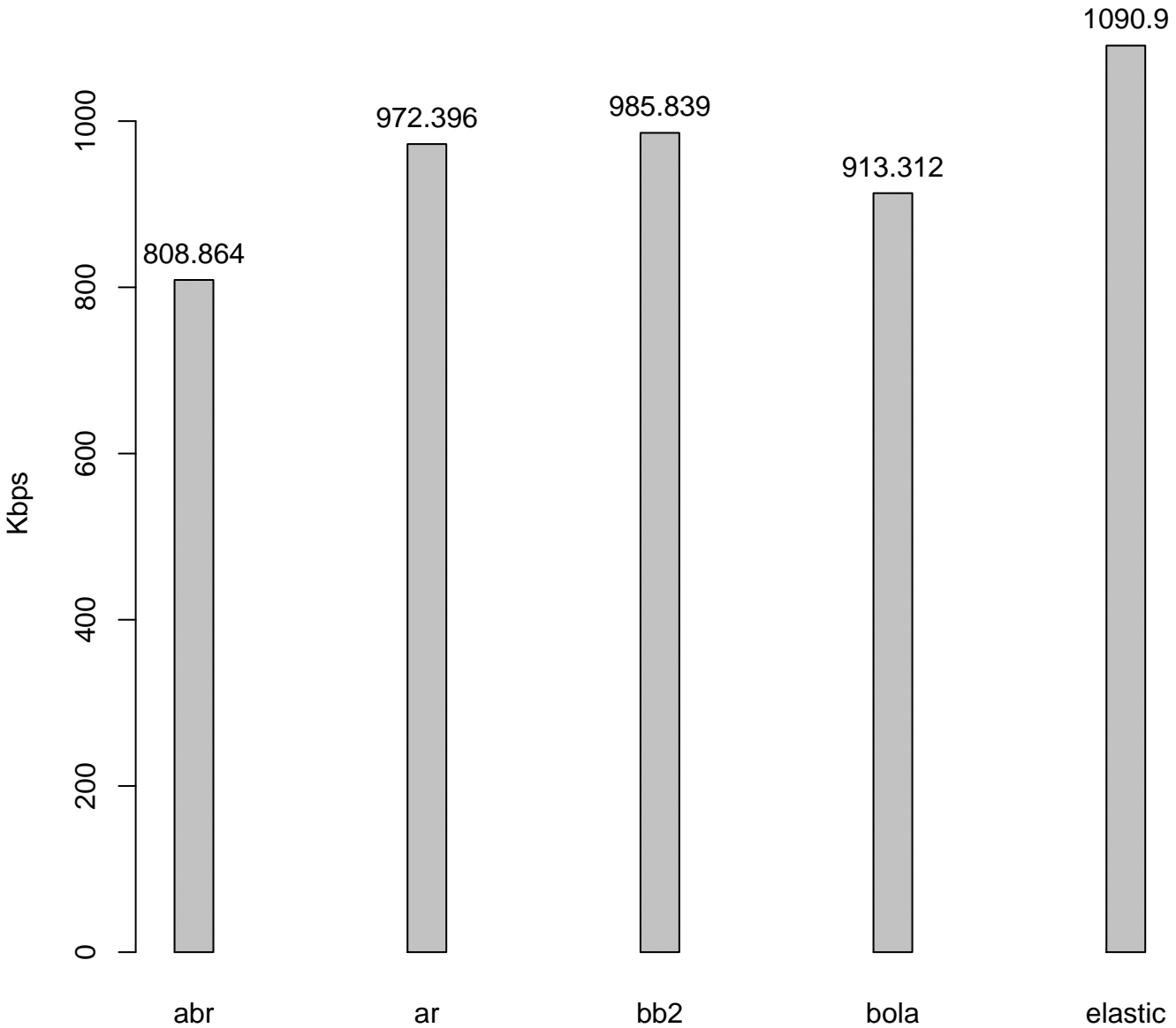**Network profile: p4 Sample: t5 Metric: Inefficiency**
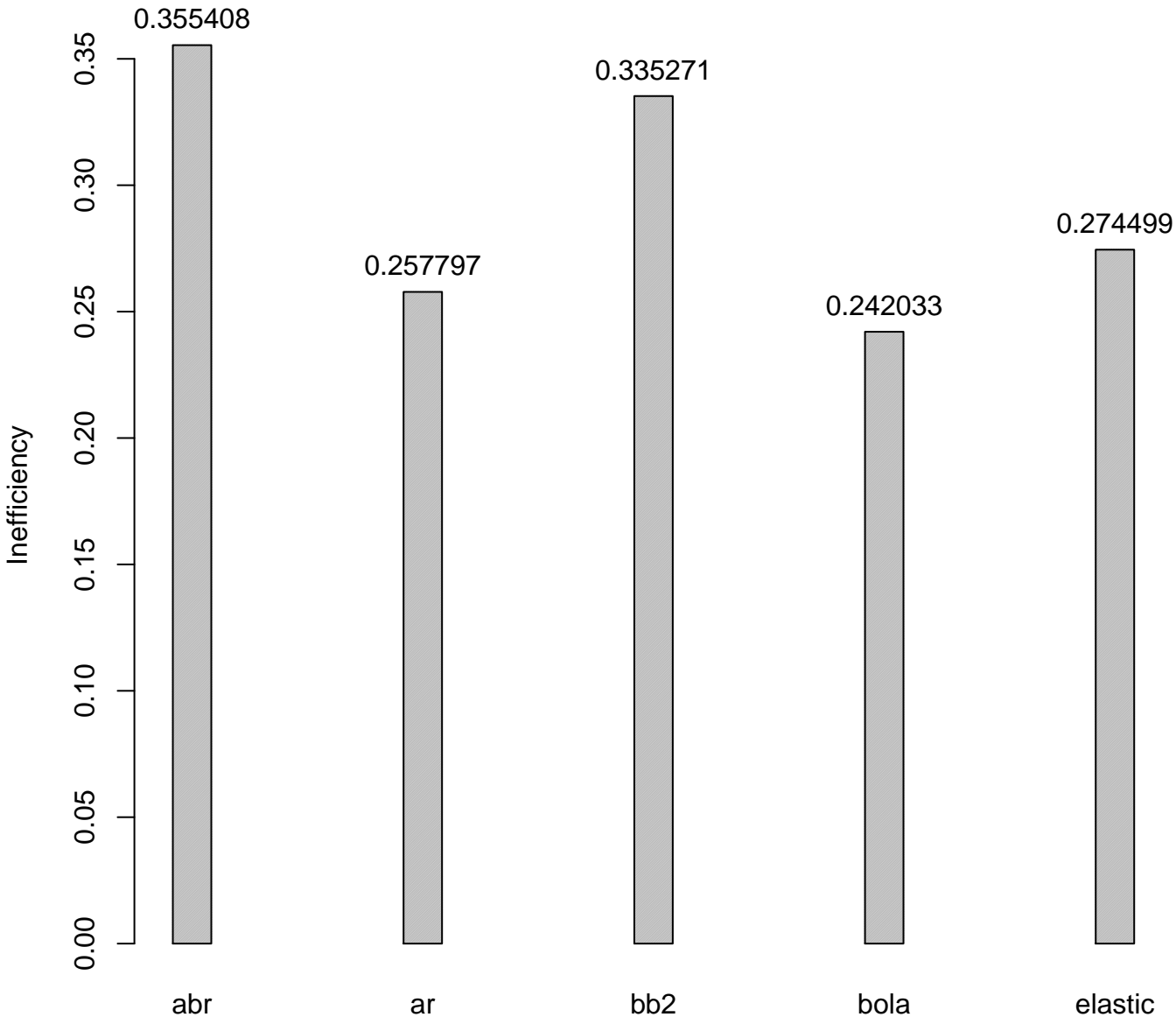**Buffer: 120 min: elastic**

Network profile: p4 Sample: t5 Metric: # quality change
Buffer: 120 min: bb2

Network profile: p4 Sample: t6 Metric: Avg−Bitrate
Buffer: 120 max: elastic

**Network profile: p4 Sample: t6 Metric: Inefficiency
Buffer: 120 min: bola**

Network profile: p4 Sample: t6 Metric: # quality change
Buffer: 120 min: bb2

Network profile: p4 Sample: t7 Metric: Avg−Bitrate
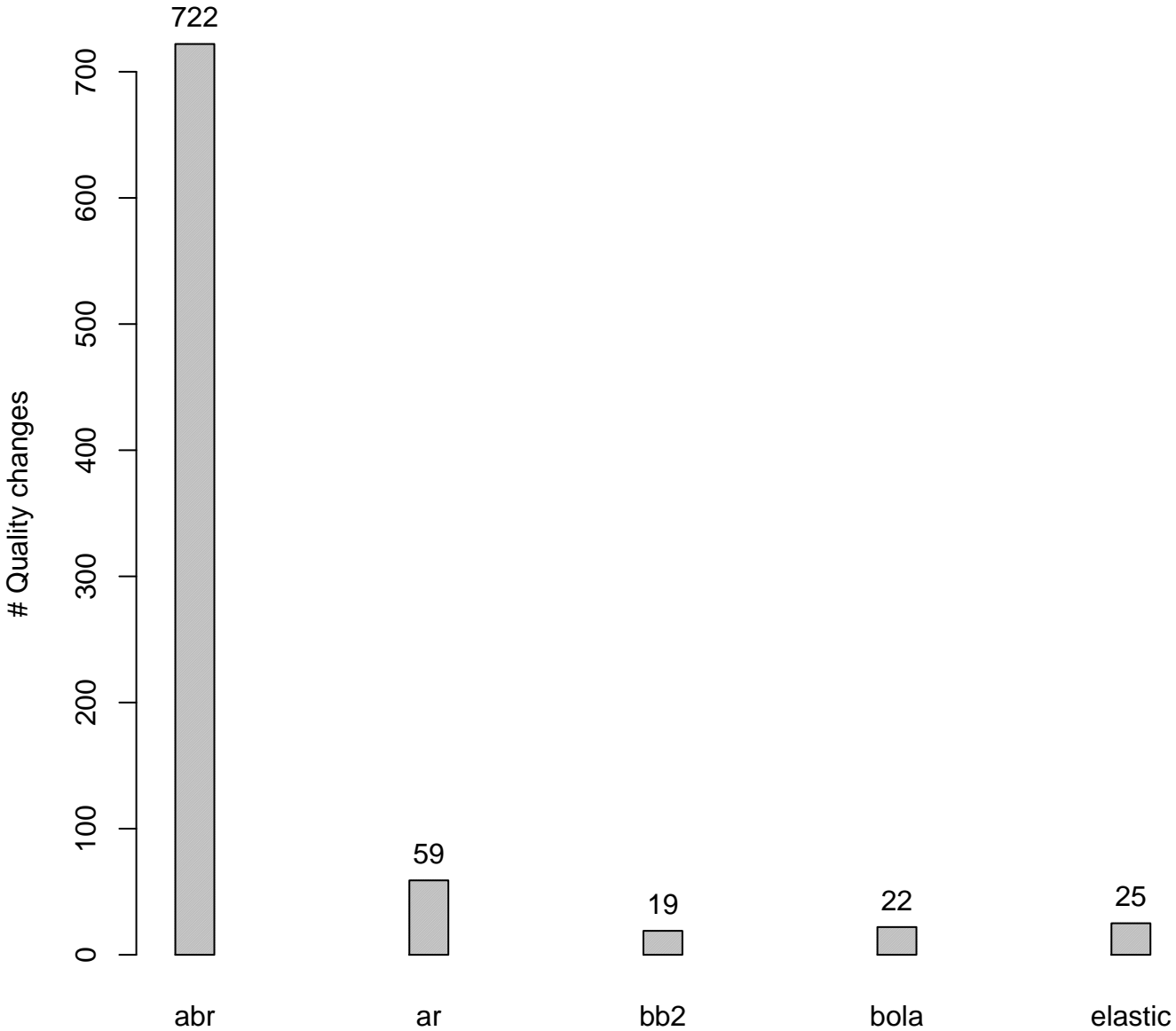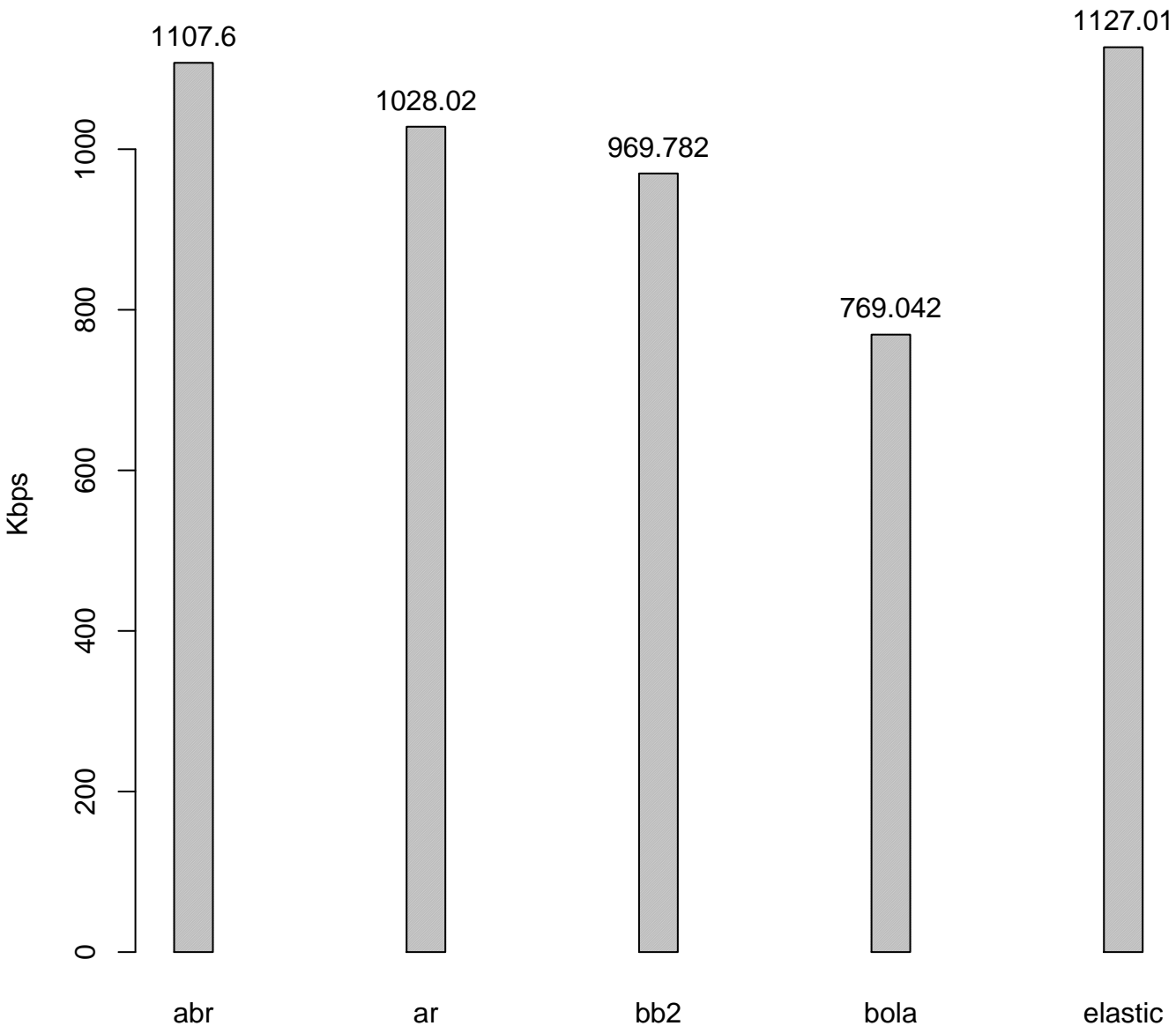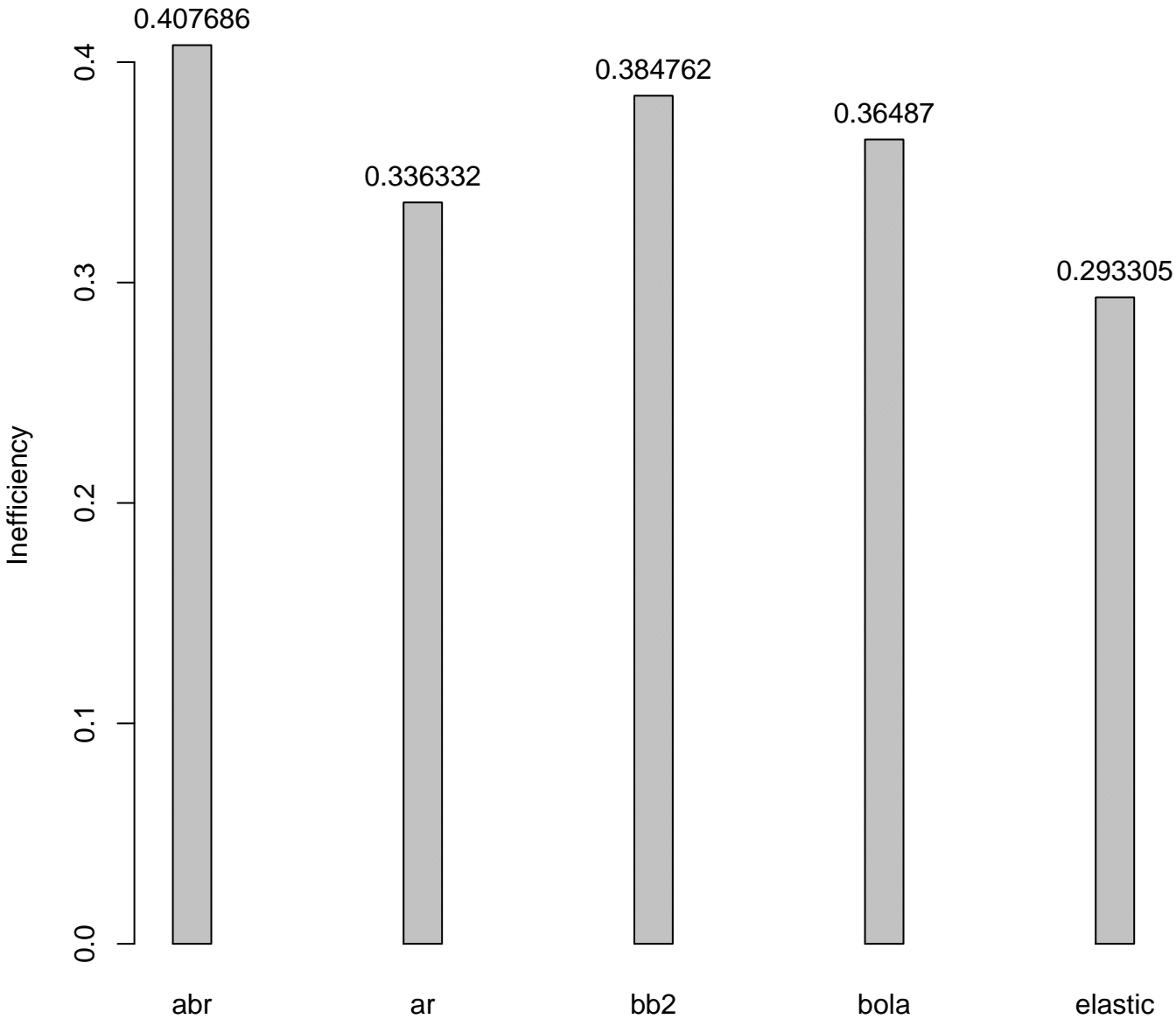**Buffer: 120 max: elastic**

Kbps

1107.6

1028.02

969.782

769.042

1127.01

abr   ar   bb2   bola   elastic

Network profile: p4 Sample: t7 Metric: Inefficiency
Buffer: 120 min: elastic

Network profile: p4 Sample: t7 Metric: # quality change
Buffer: 120 min: bola