Network profile: p1 Sample: t1 Metric: Avg−Bitrate
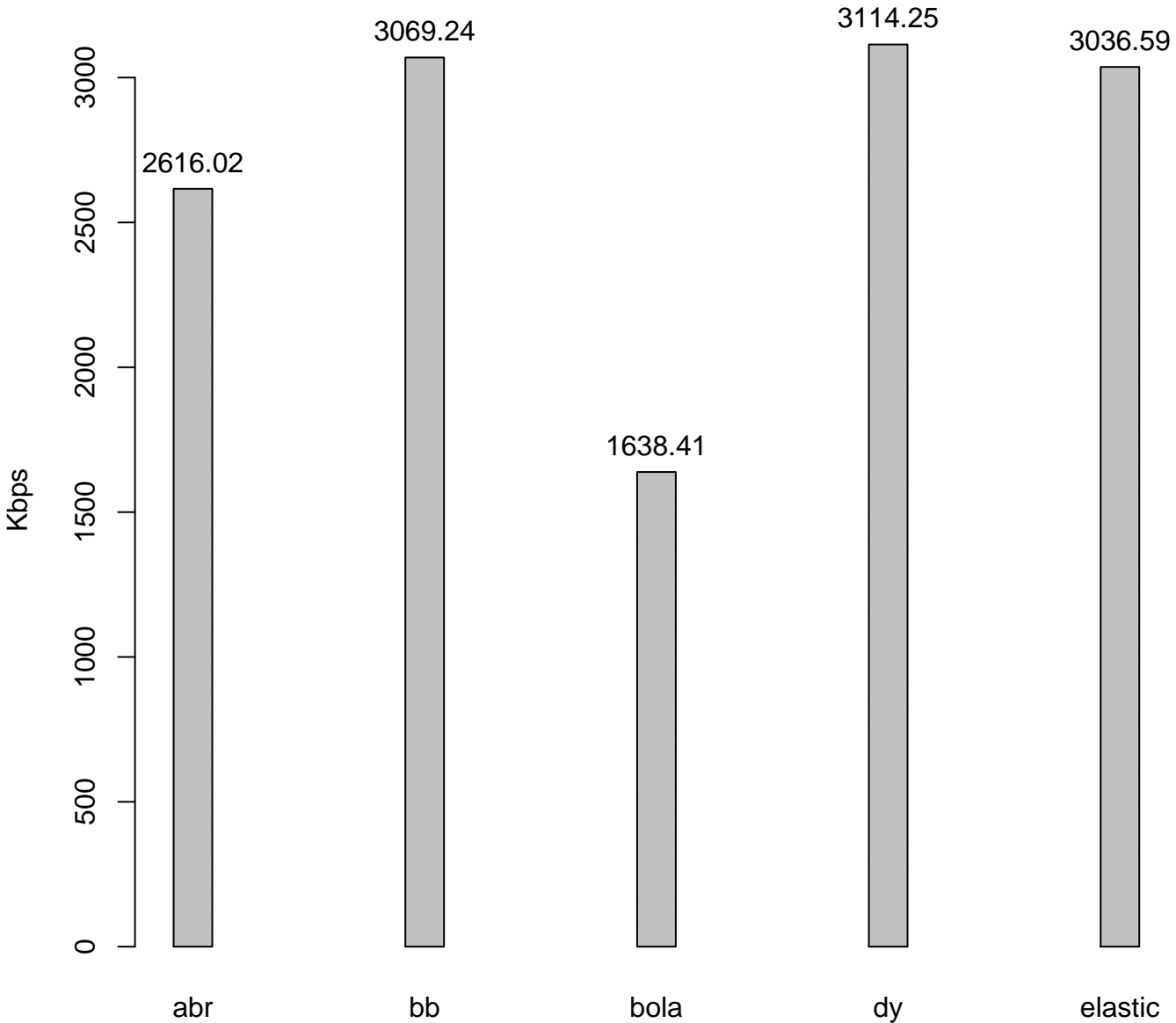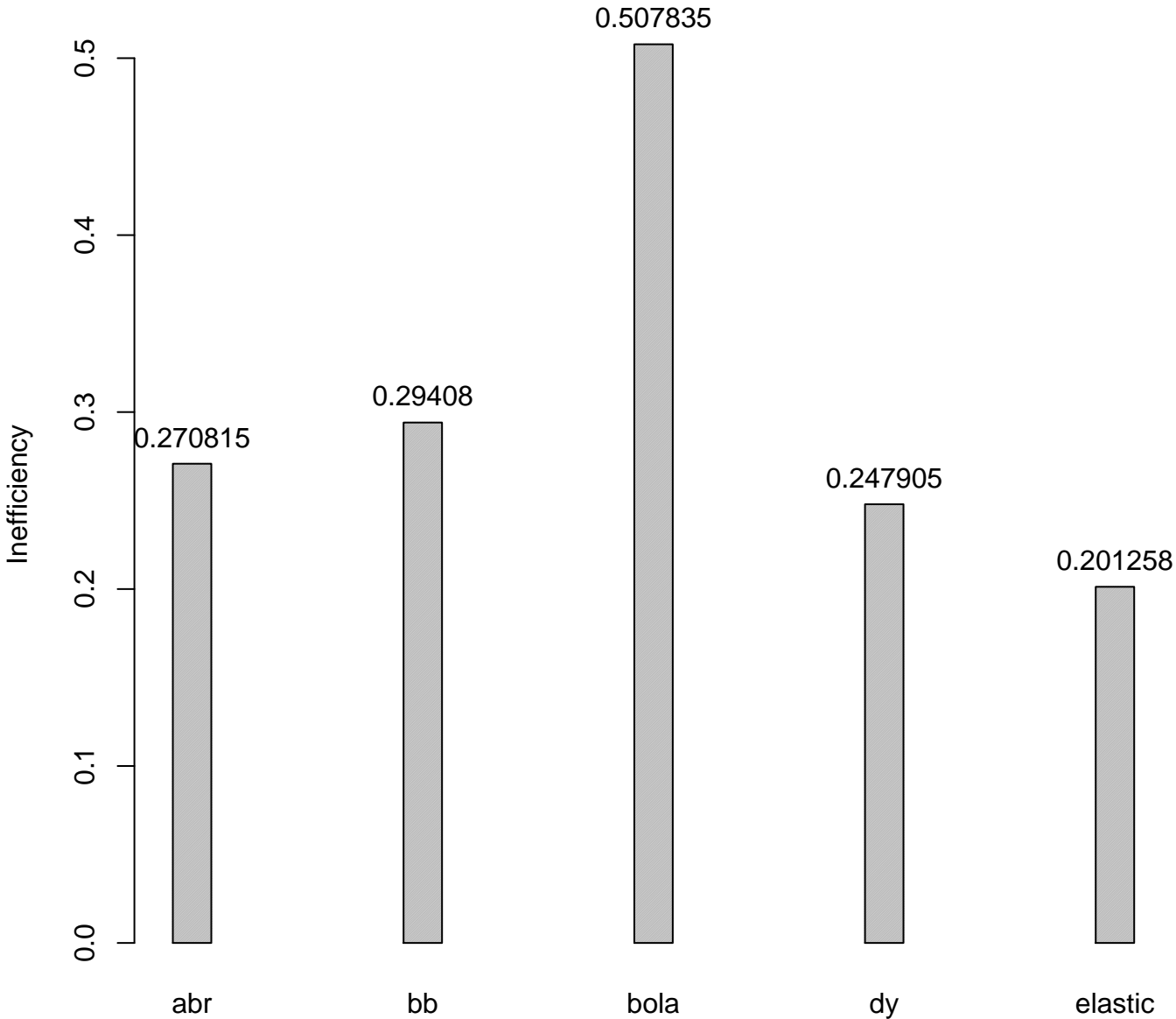**Buffer: 30−60 max: dy**

Network profile: p1 Sample: t1 Metric: Inefficiency
Buffer: 30−60 min: elastic

Network profile: p1 Sample: t1 Metric: # quality change
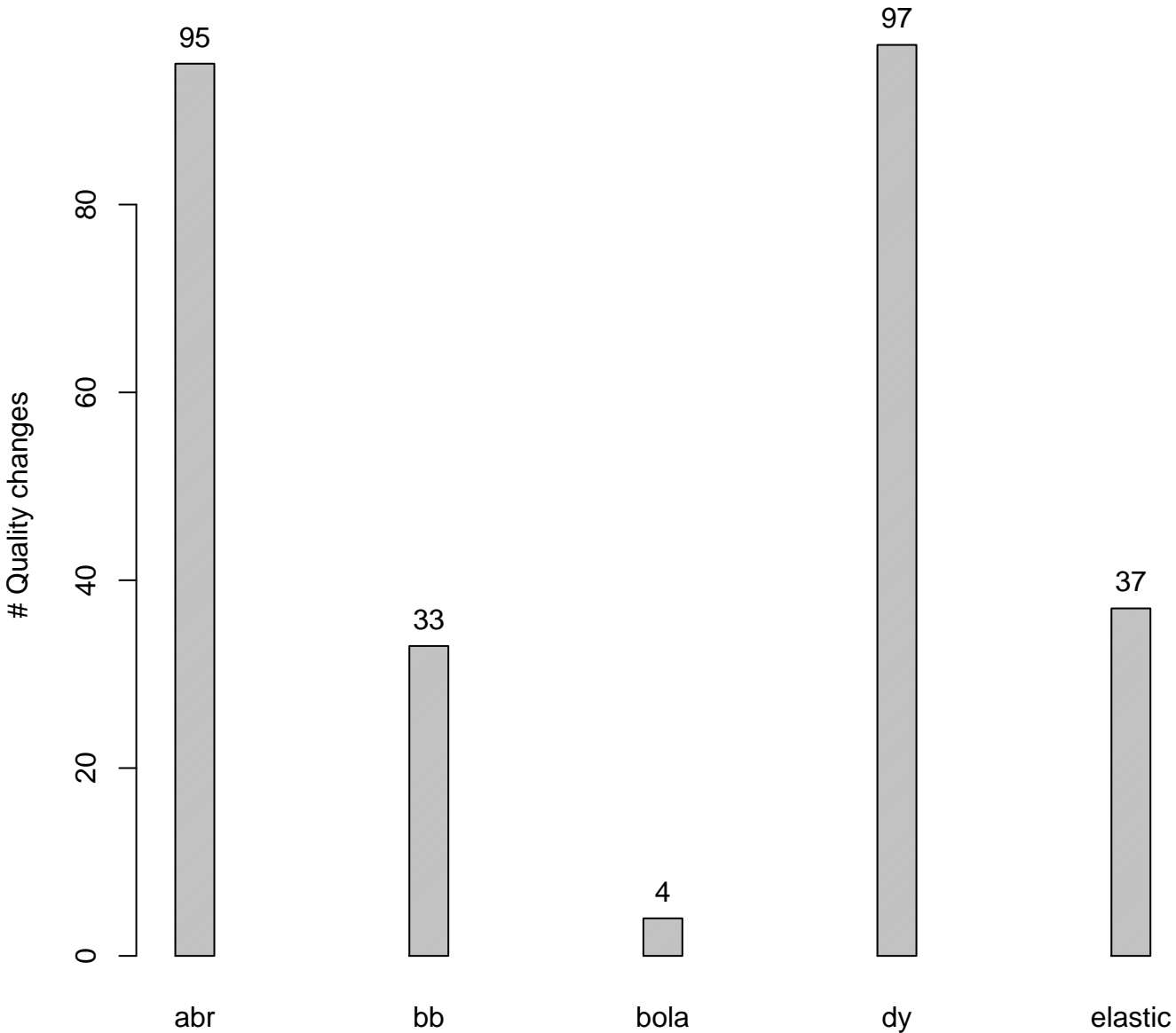**Buffer: 30–60 min: bola**

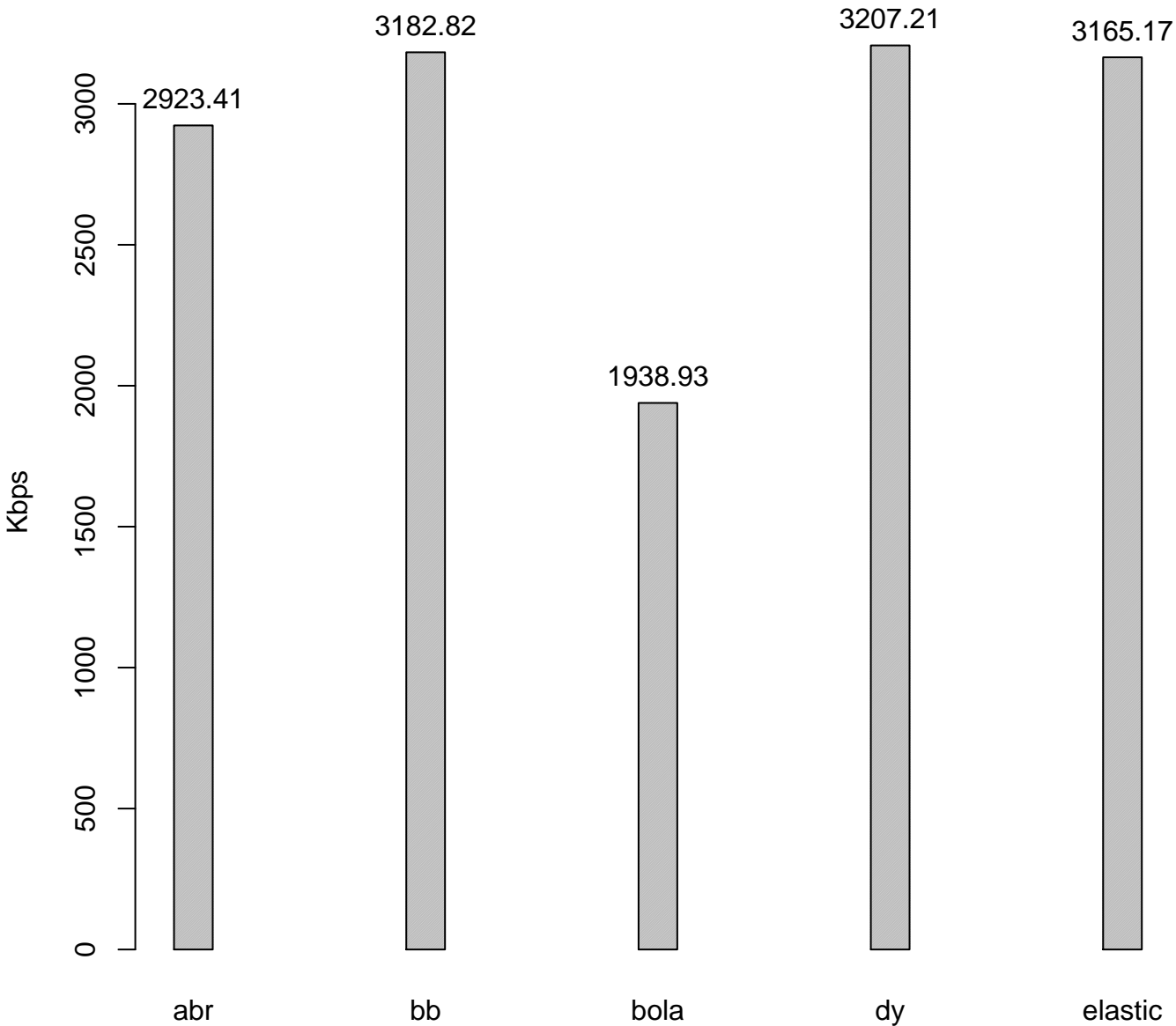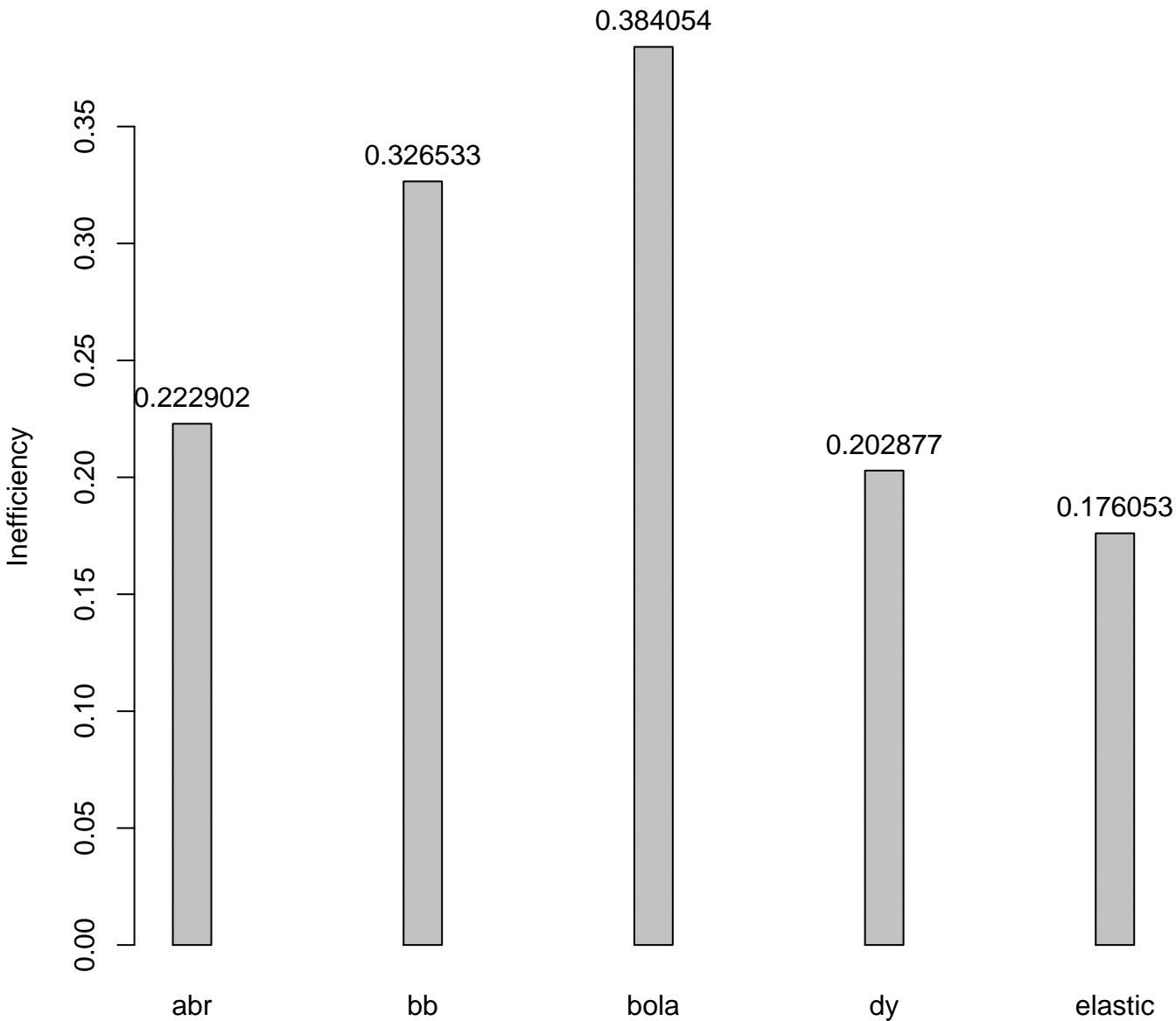**Network profile: p1 Sample: t2 Metric: Avg−Bitrate**
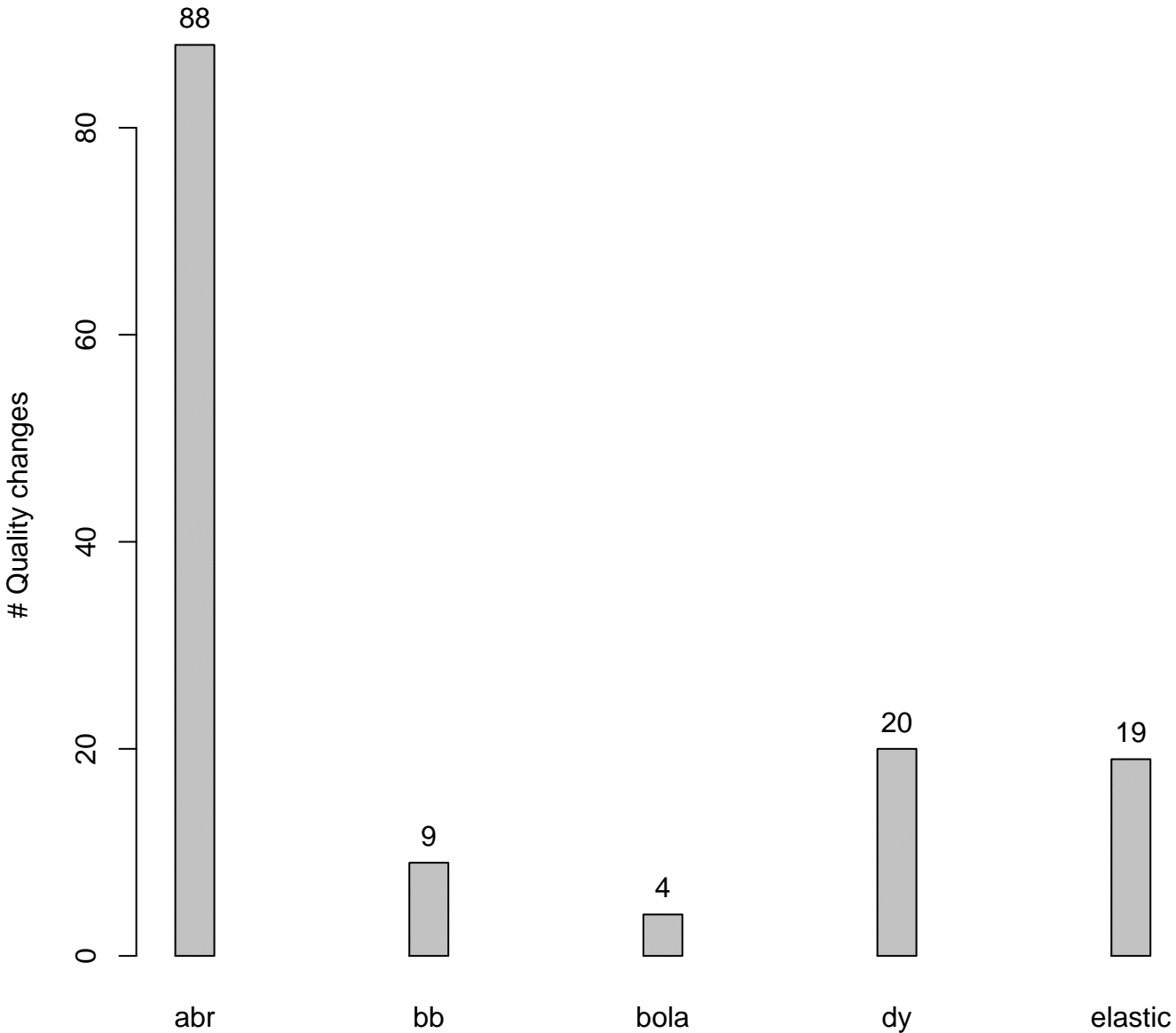**Buffer: 30−60 max: dy**

Network profile: p1 Sample: t2 Metric: Inefficiency
Buffer: 30−60 min: elastic

Network profile: p1 Sample: t2 Metric: # quality change
Buffer: 30–60 min: bola

Network profile: p1 Sample: t3 Metric: Avg−Bitrate
Buffer: 30−60   max: bb

Kbps

2719.58	3271.61	2887.93	3170.72	3153.84
abr	bb	bola	dy	elastic

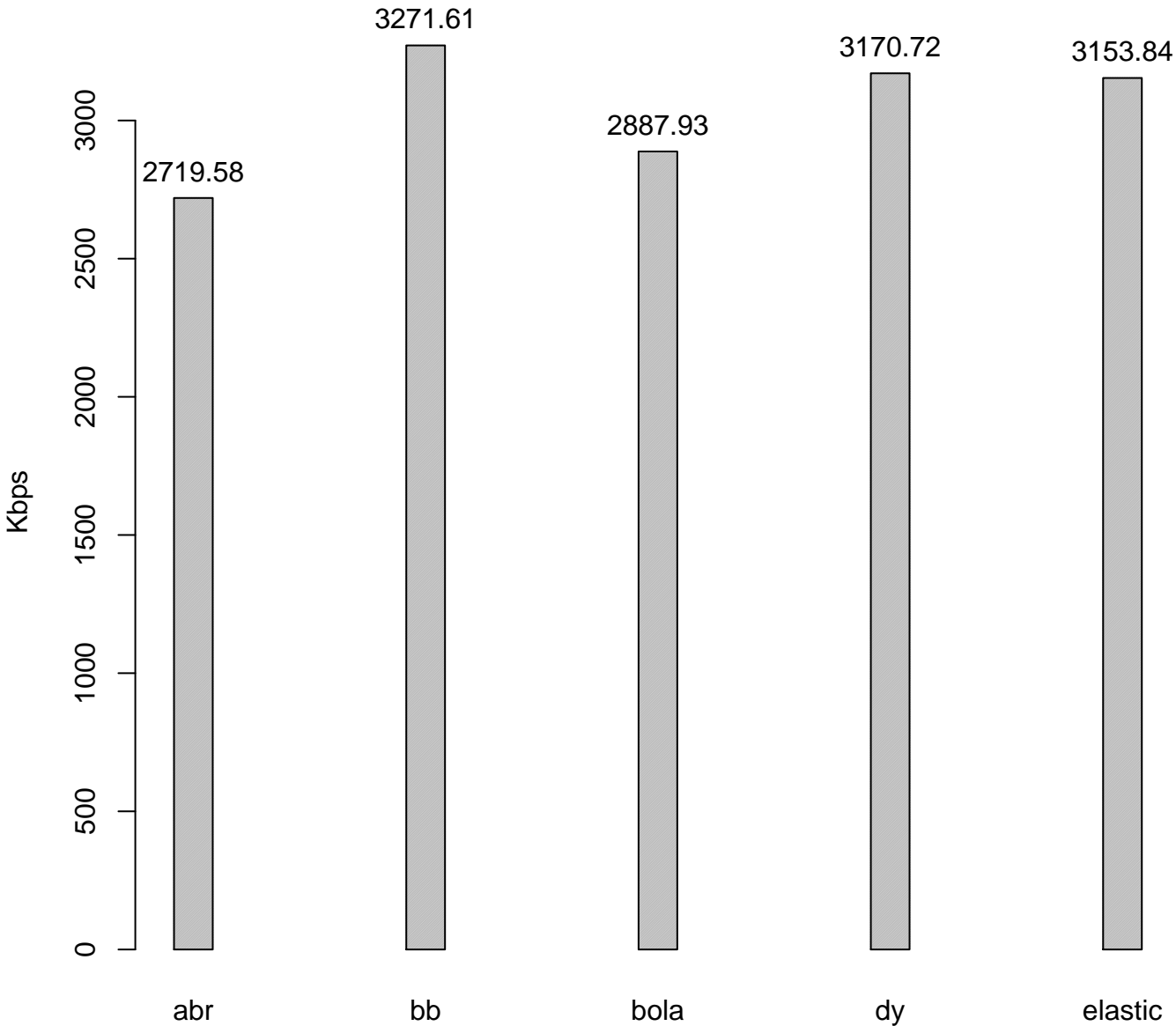**Network profile: p1 Sample: t3 Metric: Inefficiency**
Buffer: 30−60 min: elastic

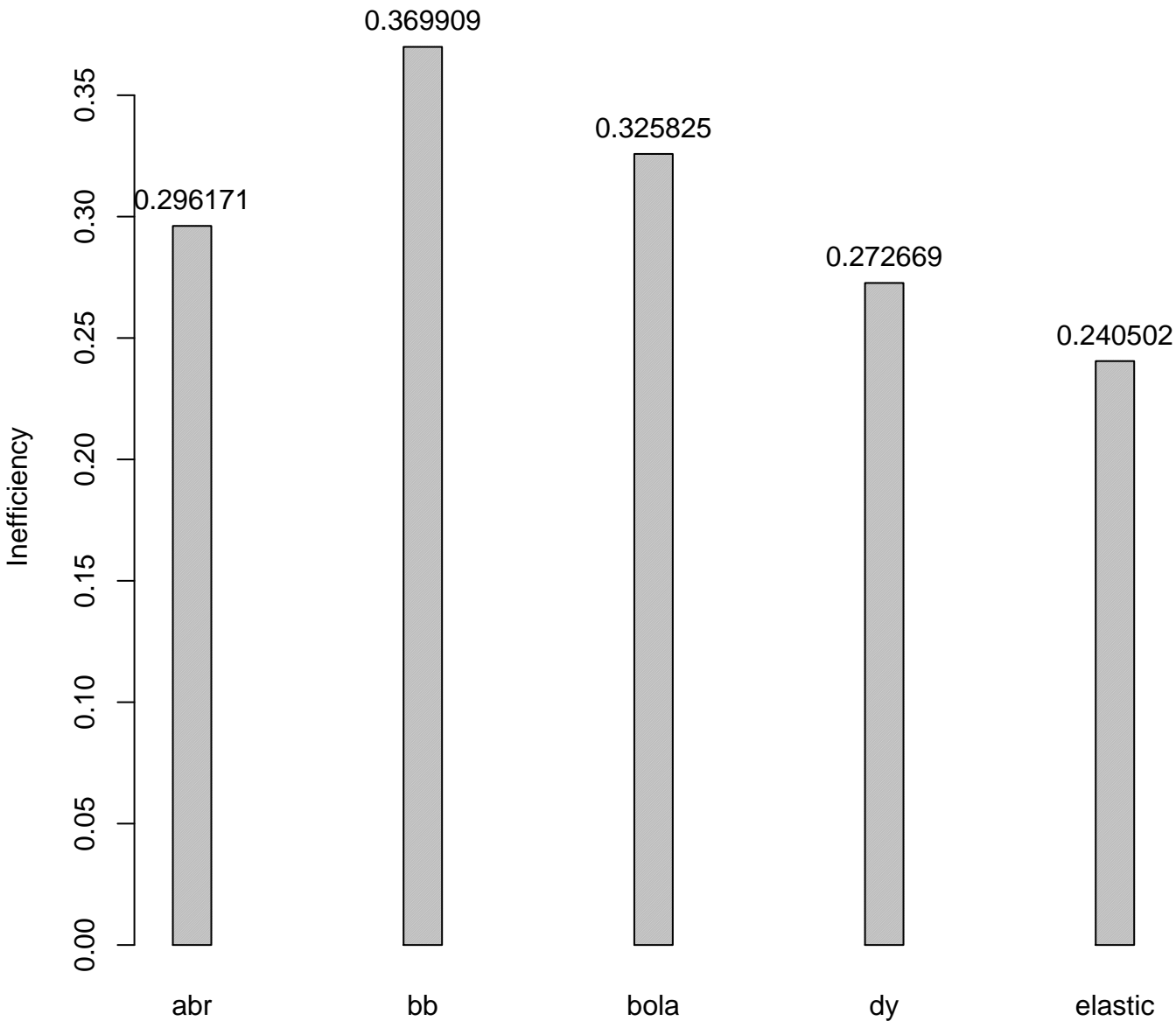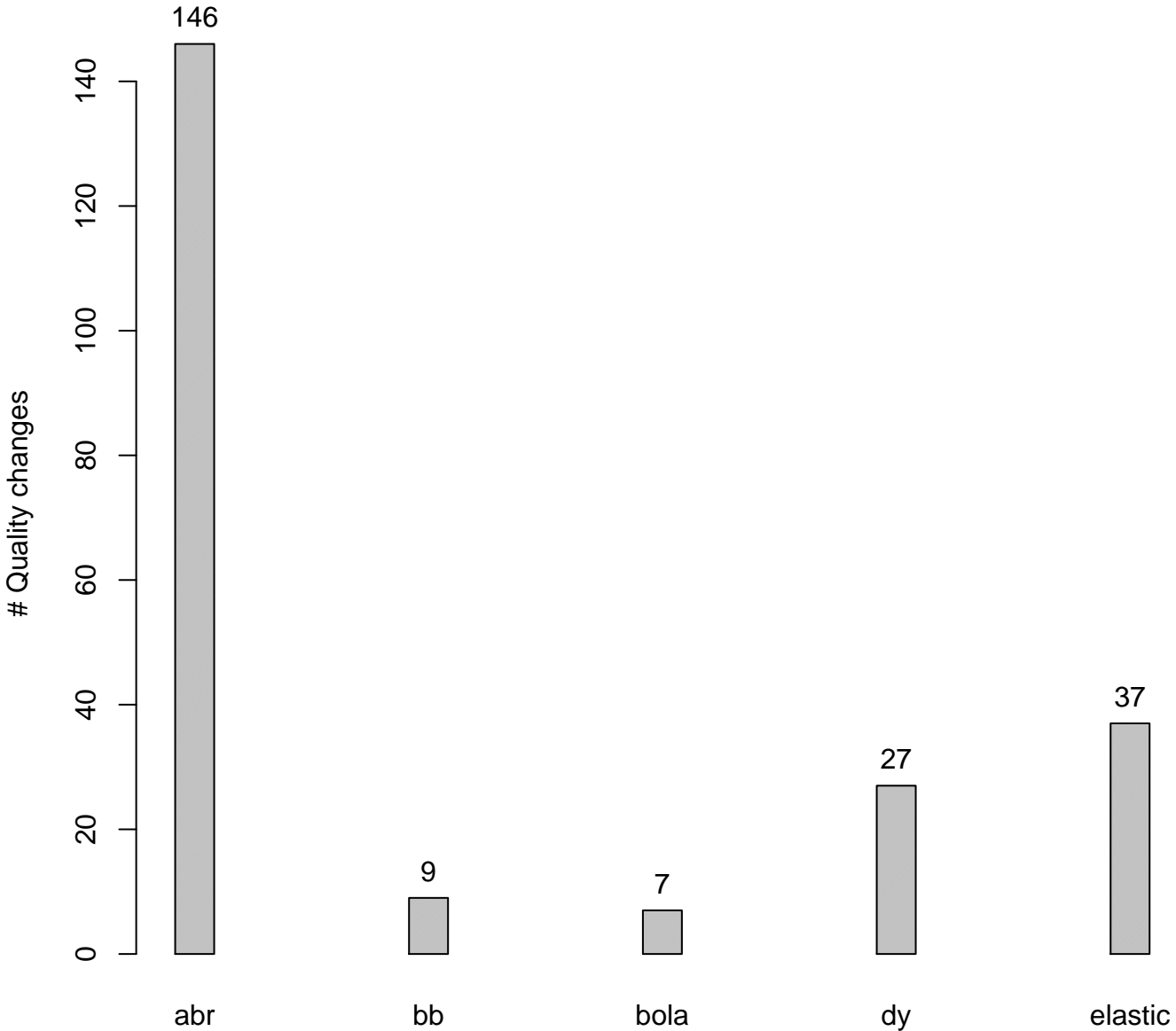**Network profile: p1 Sample: t3 Metric: # quality change**
Buffer: 30–60 min: bola

Network profile: p1 Sample: t4 Metric: Avg−Bitrate
Buffer: 30−60   max: dy

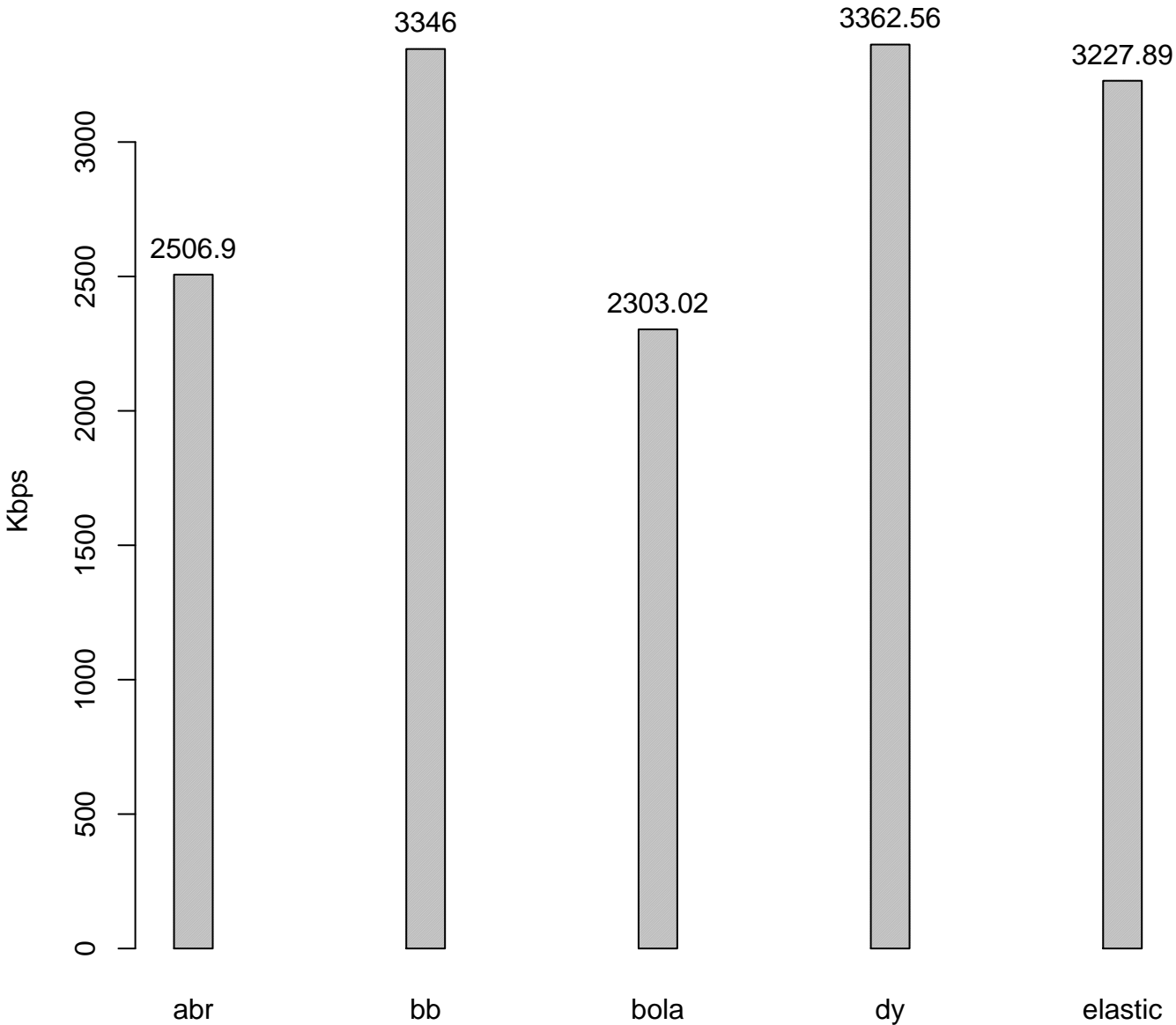**Network profile: p1 Sample: t4 Metric: Inefficiency**
Buffer: 30−60 min: elastic

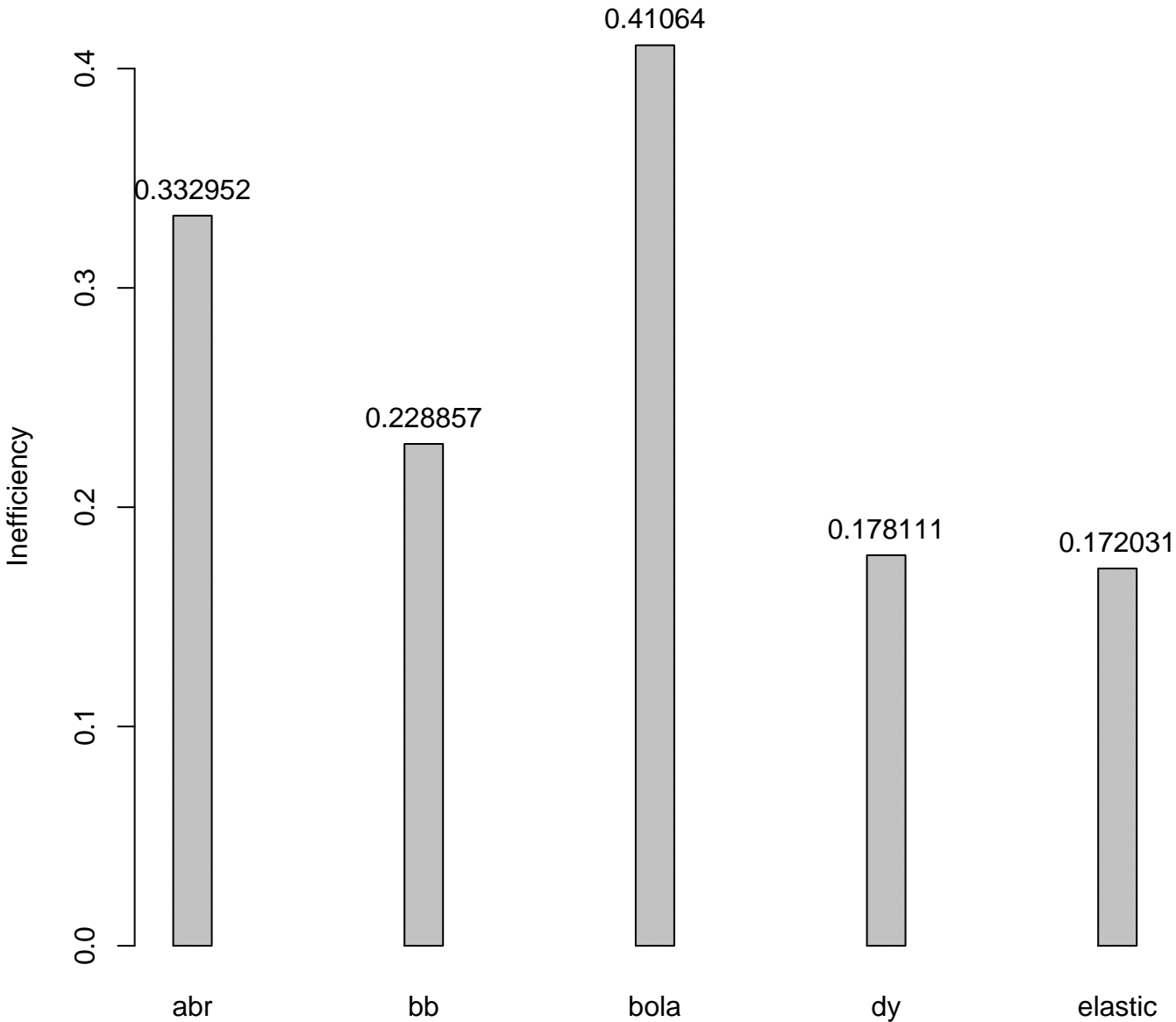**Network profile: p1 Sample: t4 Metric: # quality change**
Buffer: 30–60 min: bola

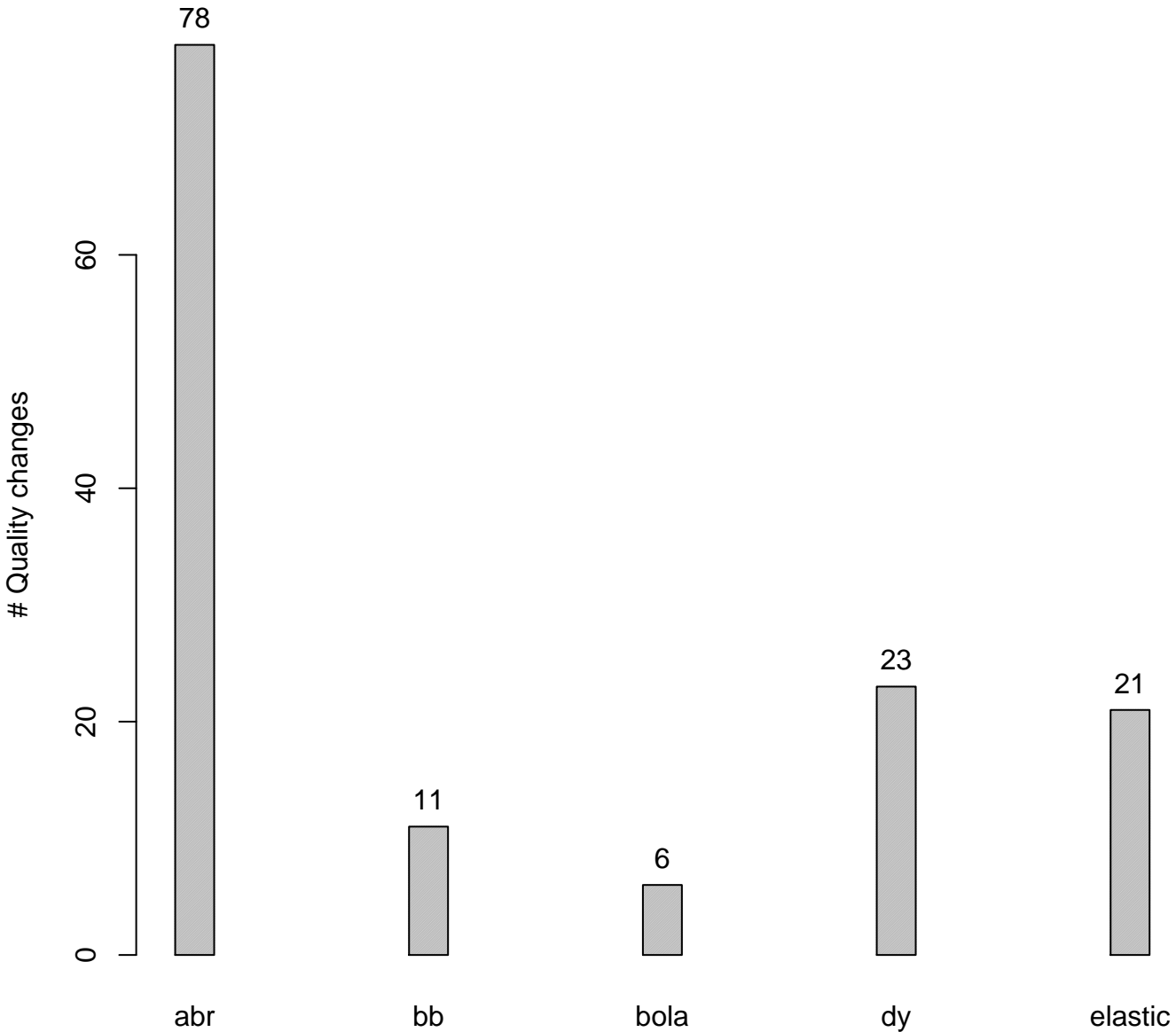**Network profile: p1 Sample: t5 Metric: Avg−Bitrate**
Buffer: 30−60   max: bola

Network profile: p1 Sample: t5 Metric: Inefficiency
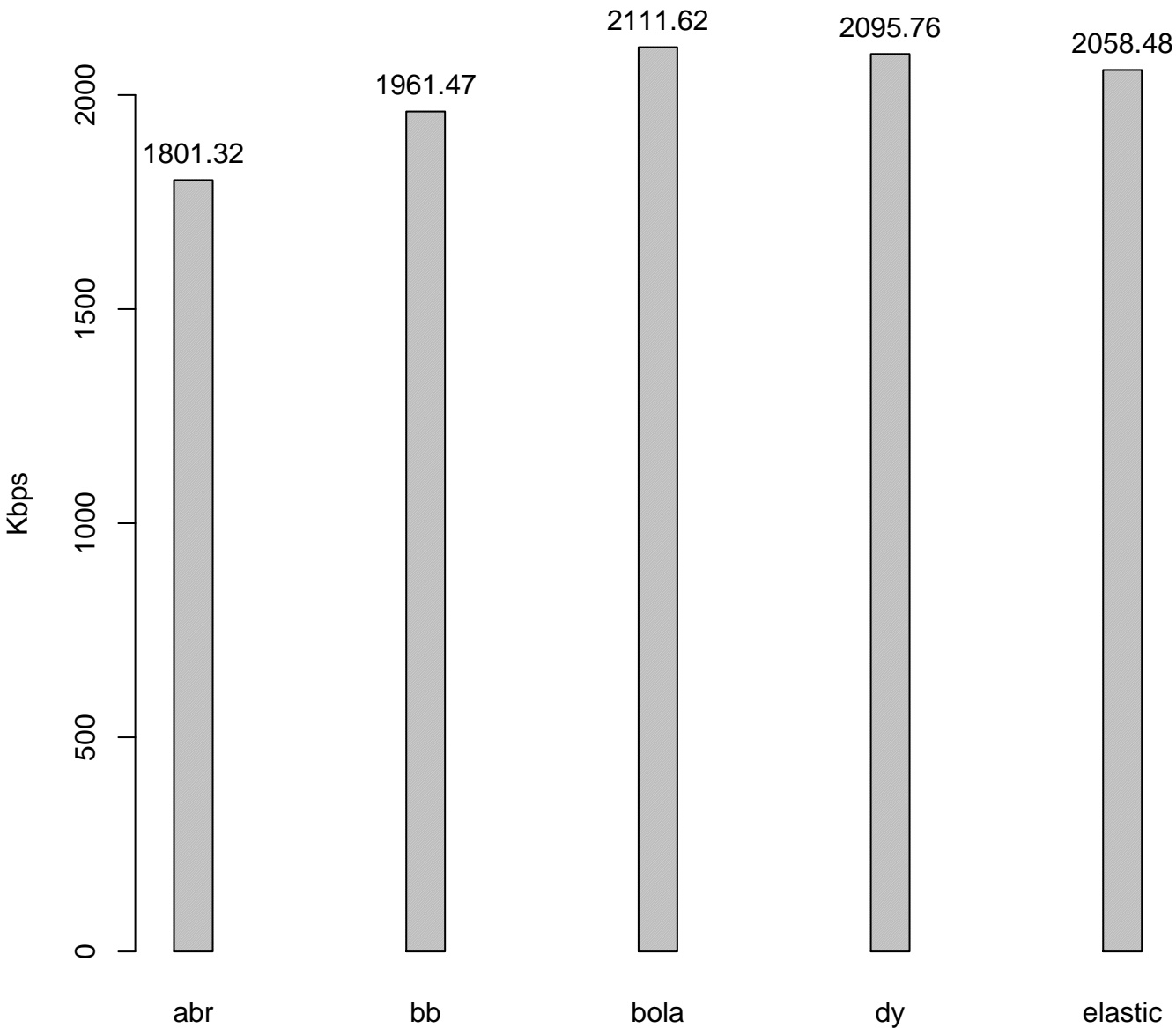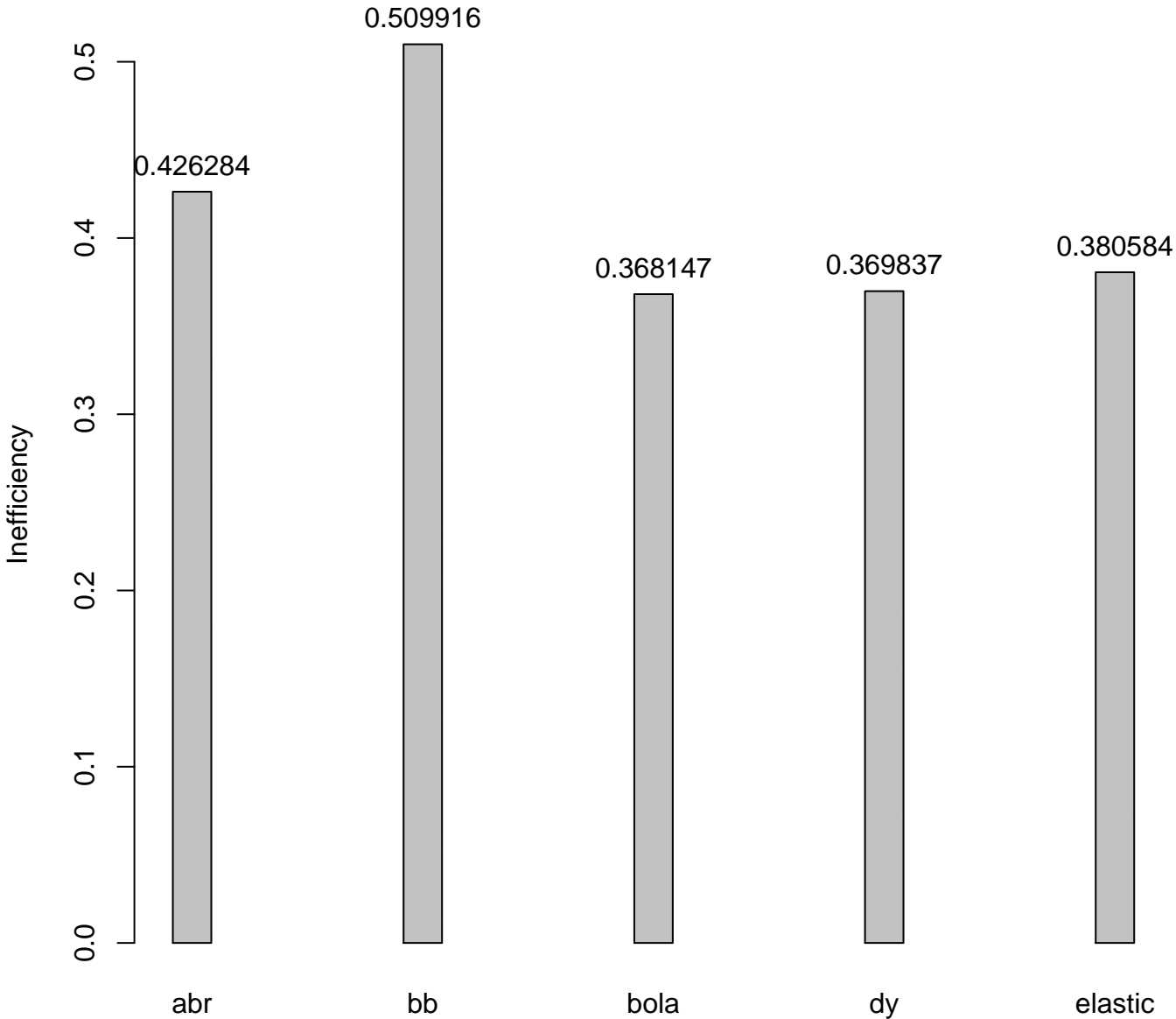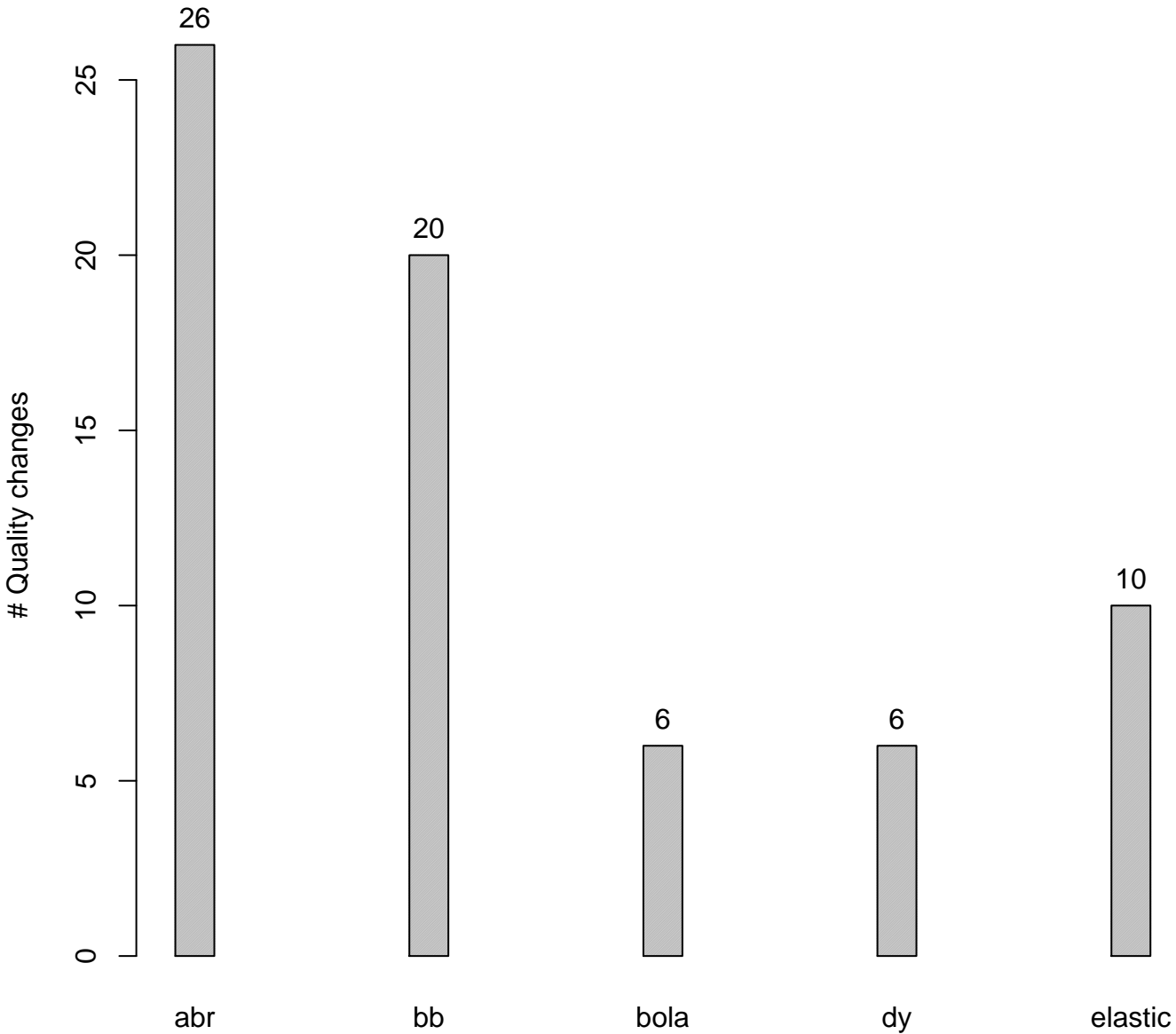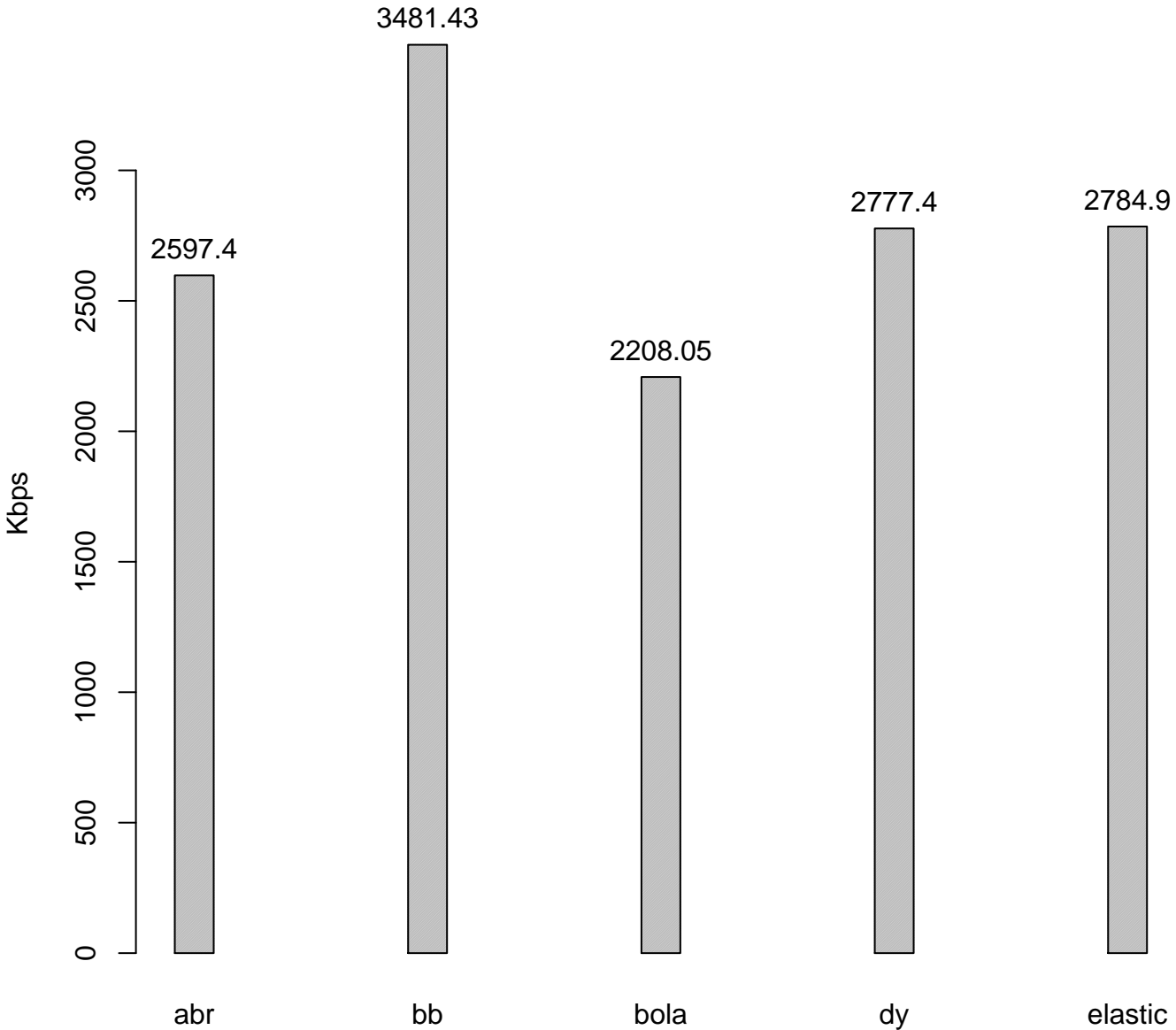**Buffer: 30−60 min: bola**

Network profile: p1 Sample: t5 Metric: # quality change
Buffer: 30−60 min: bola

Network profile: p1 Sample: t6 Metric: Avg−Bitrate
Buffer: 30−60   max: bb

Kbps

3481.43

2597.4

2208.05

2777.4

2784.9

3000

2500

2000

1500

1000

500

0

abr   bb   bola   dy   elastic

Network profile: p1 Sample: t6 Metric: Inefficiency
Buffer: 30−60 min: elastic

Network profile: p1 Sample: t6 Metric: # quality change
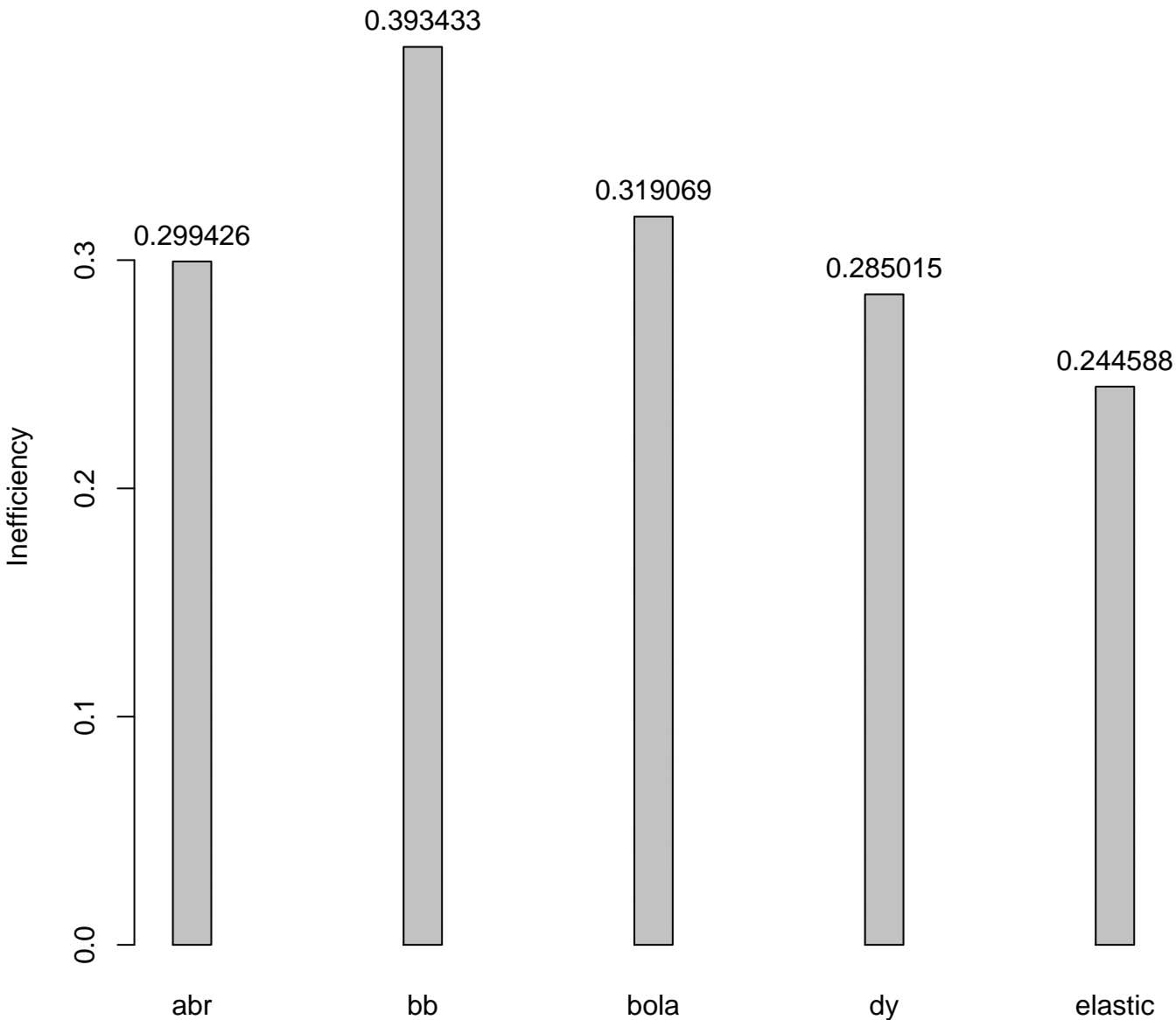**Buffer: 30−60 min: elastic**

Network profile: p1 Sample: t7 Metric: Avg−Bitrate
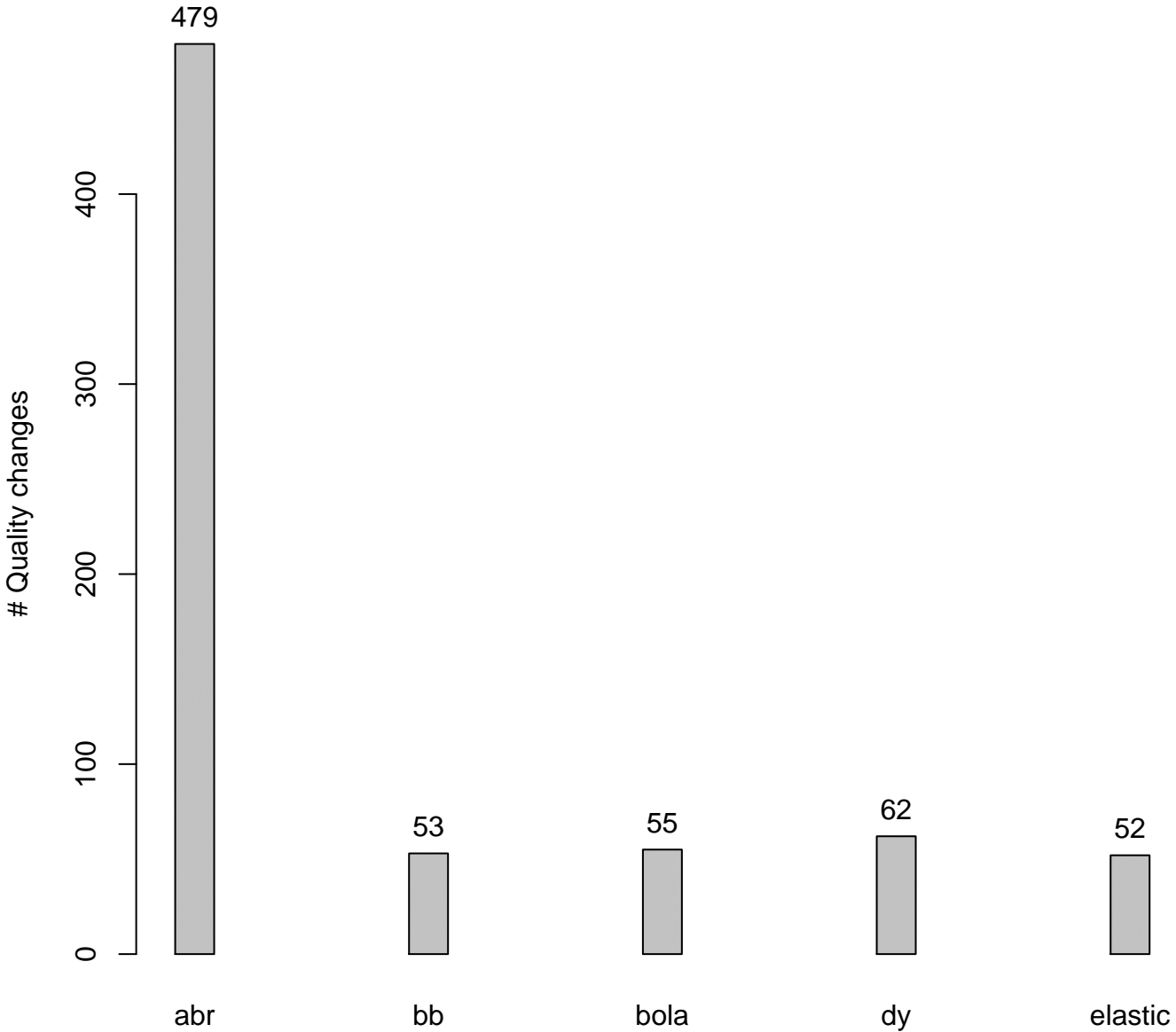**Buffer: 30−60   max: dy**

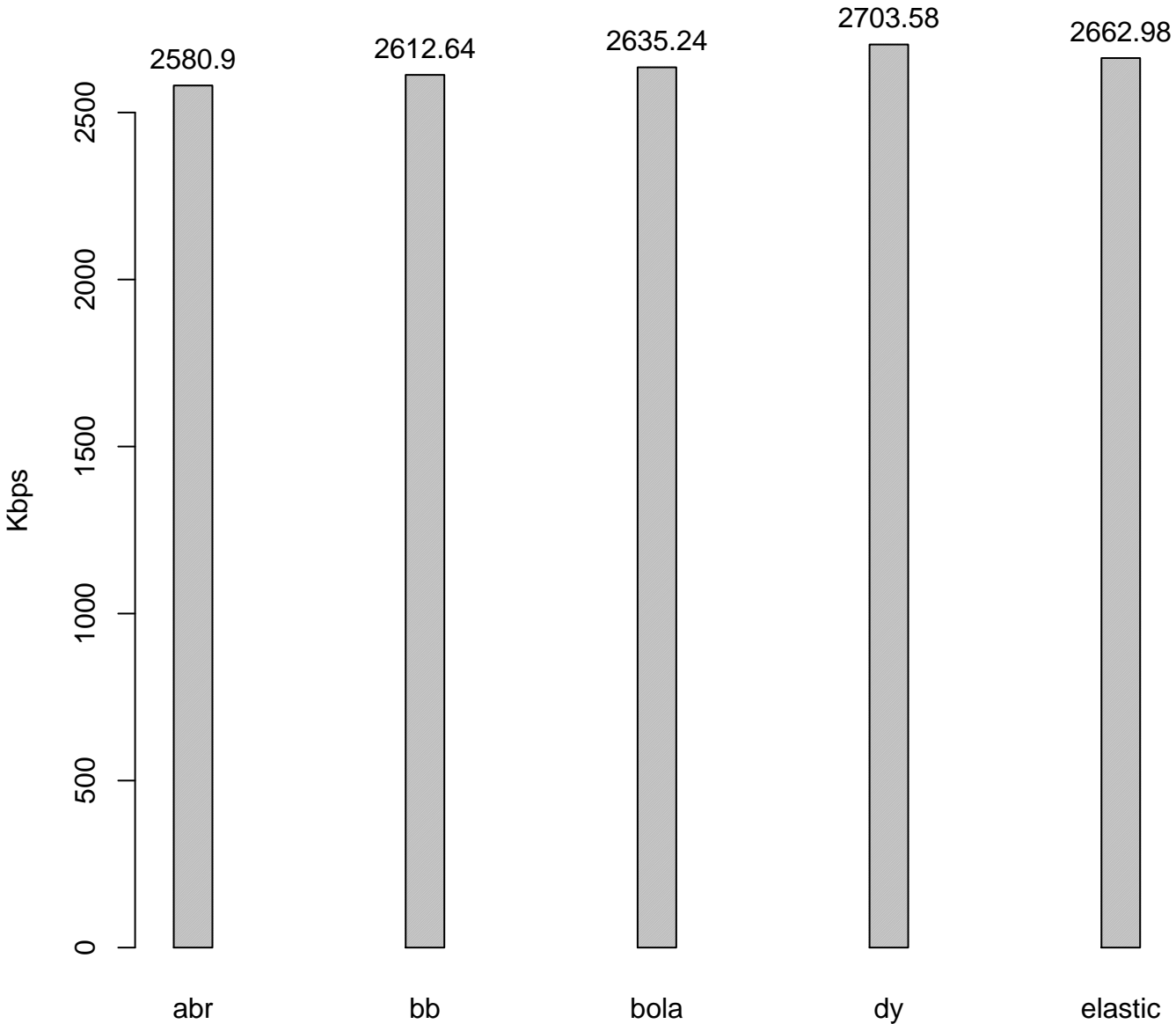**Network profile: p1 Sample: t7 Metric: Inefficiency**
Buffer: 30−60 min: elastic

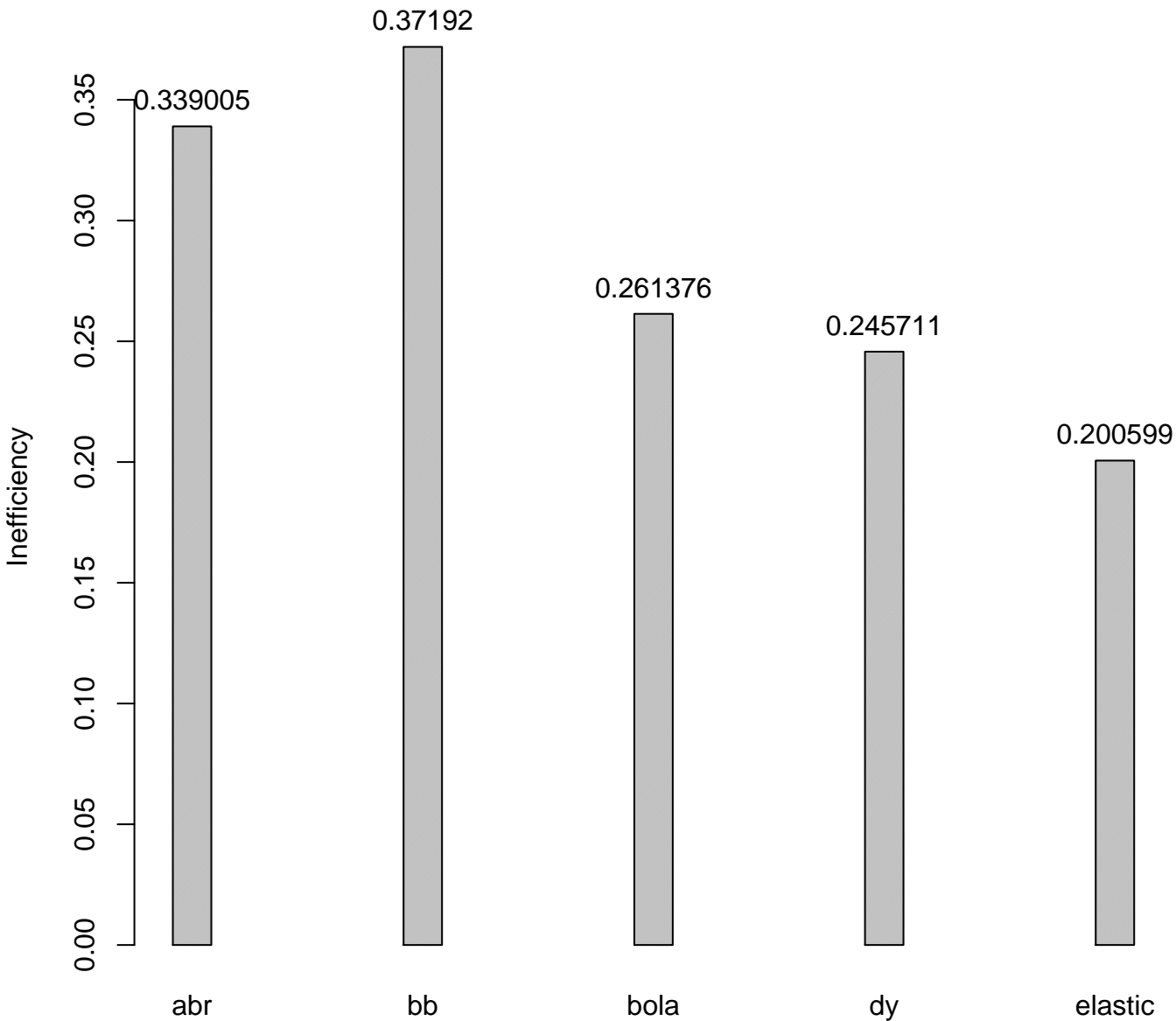**Network profile: p1 Sample: t7 Metric: # quality change**
Buffer: 30–60 min: bb

Network profile: p2 Sample: t1 Metric: Avg−Bitrate
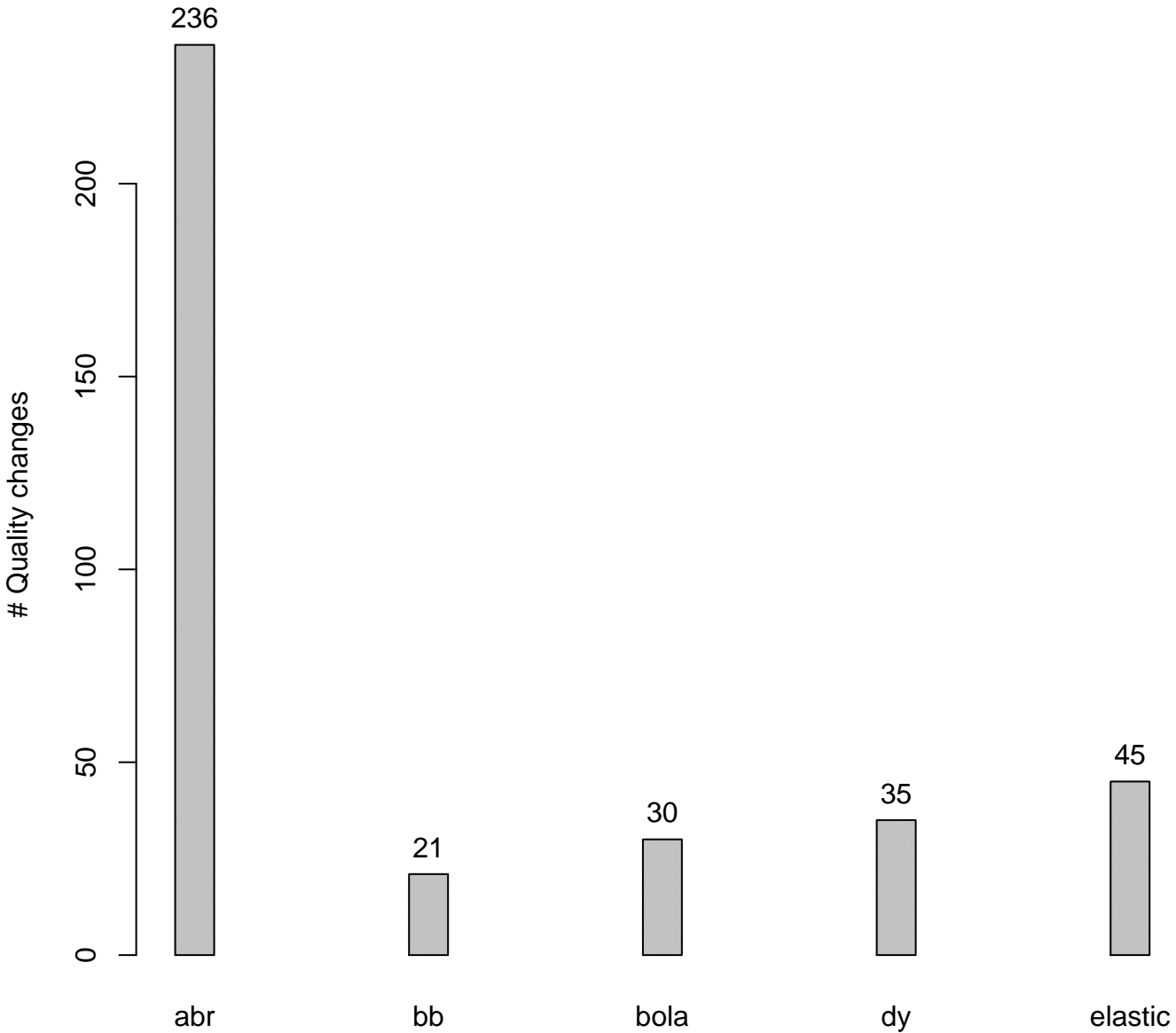**Buffer: 30−60   max: dy**

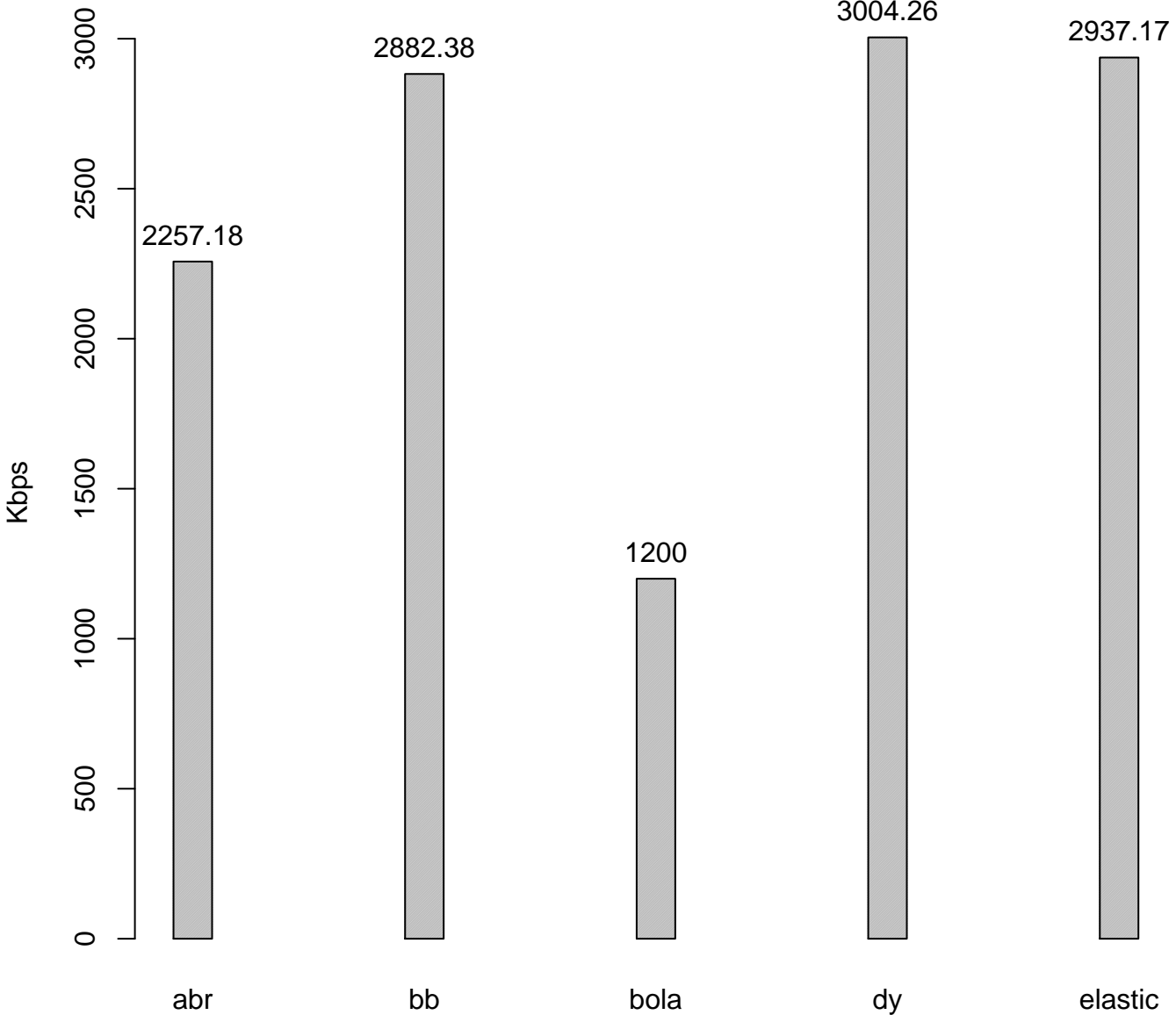**Network profile: p2 Sample: t1 Metric: Inefficiency**
Buffer: 30−60 min: elastic

Network profile: p2 Sample: t1 Metric: # quality change
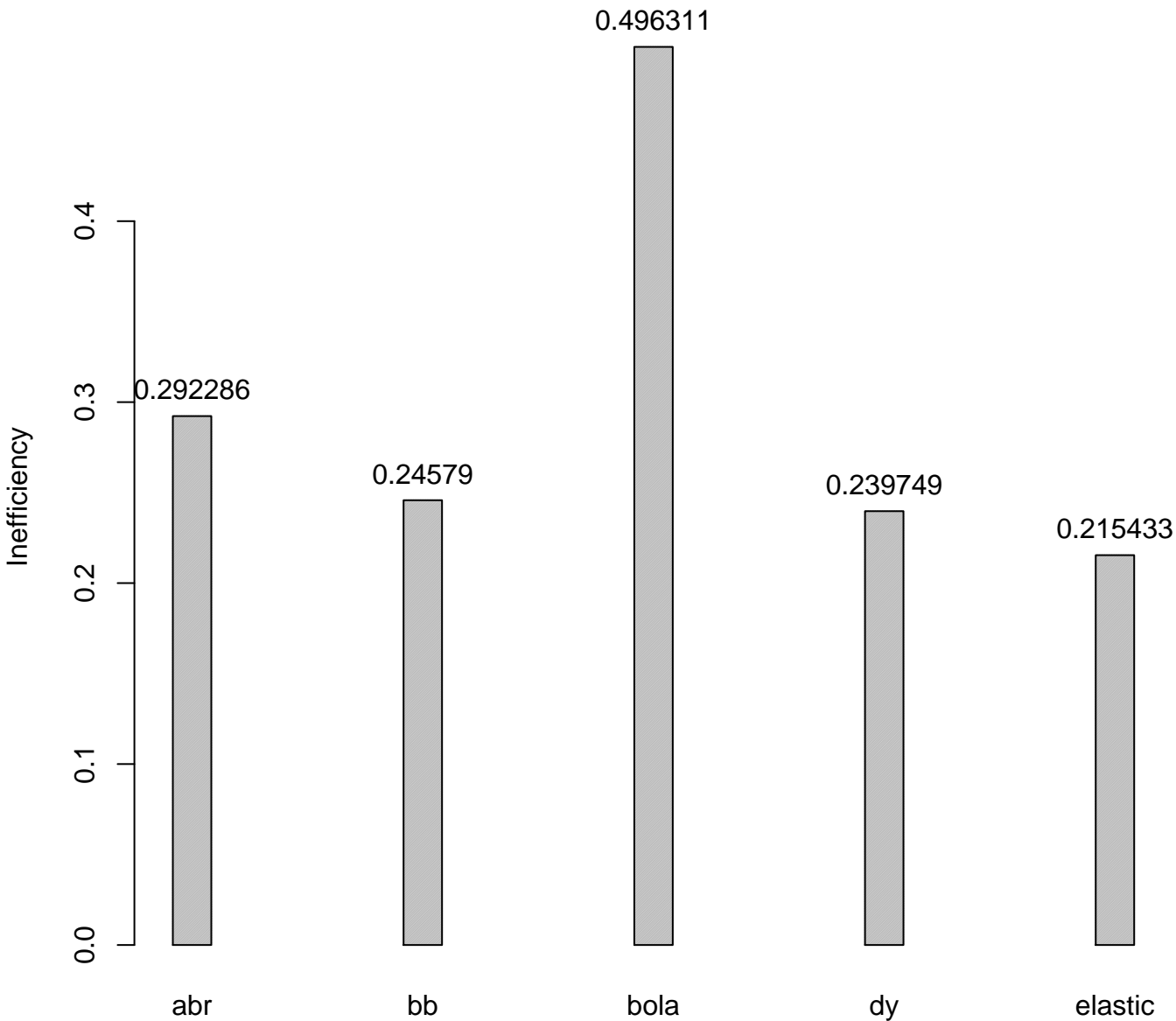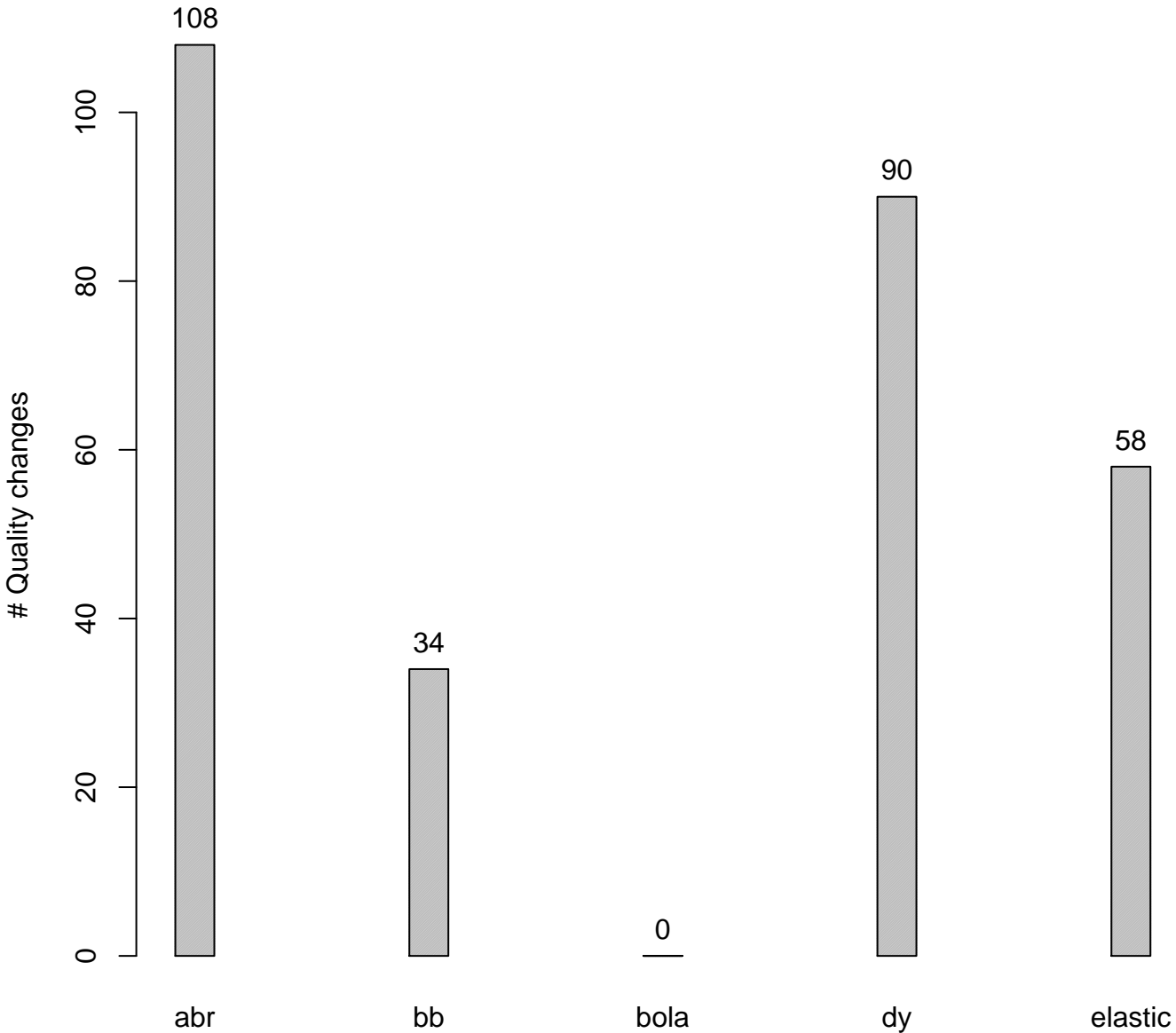**Buffer: 30−60 min: bola**

Network profile: p2 Sample: t2 Metric: Avg−Bitrate
Buffer: 30−60   max: dy

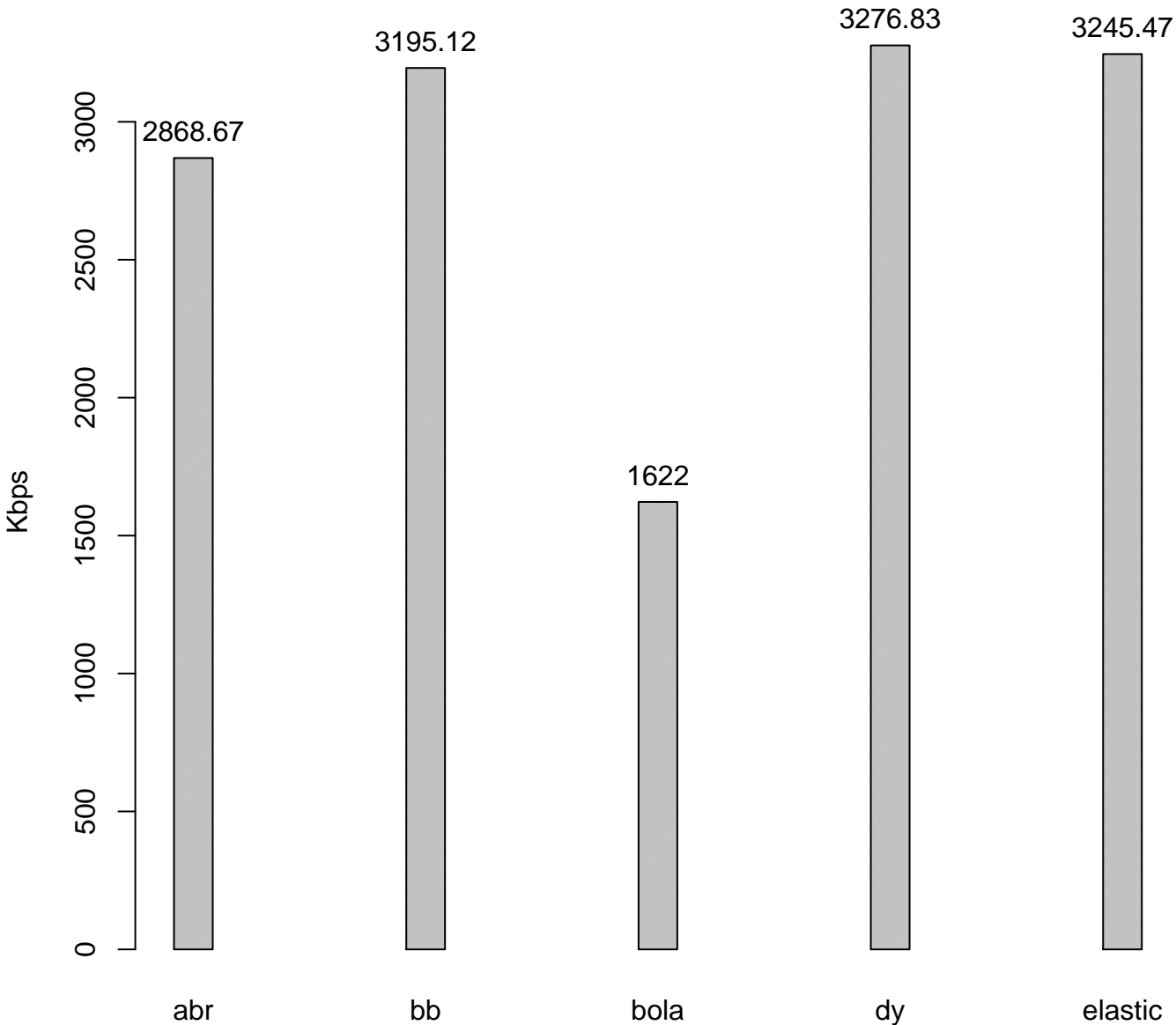**Network profile: p2 Sample: t2 Metric: Inefficiency**
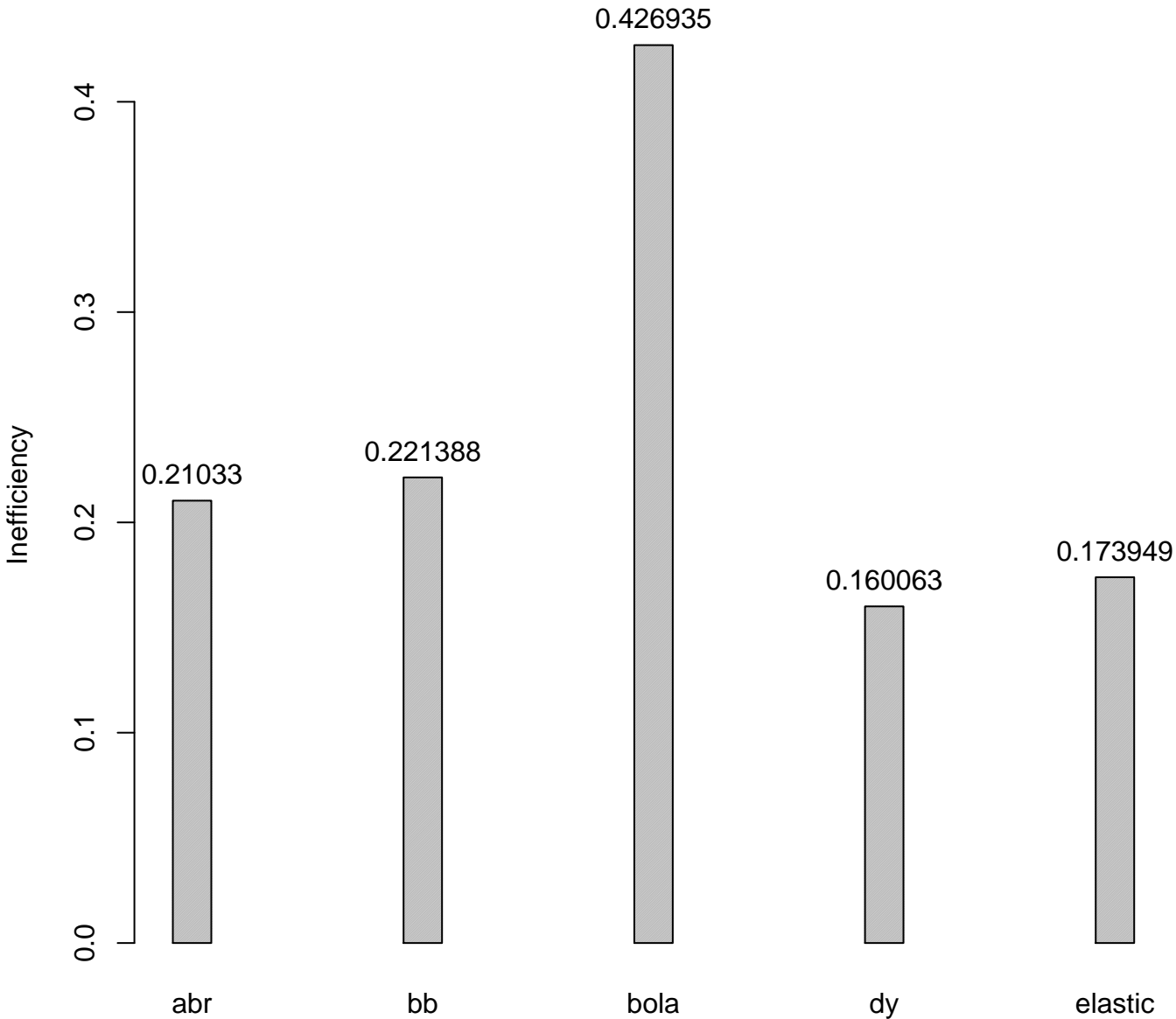**Buffer: 30−60 min: dy**

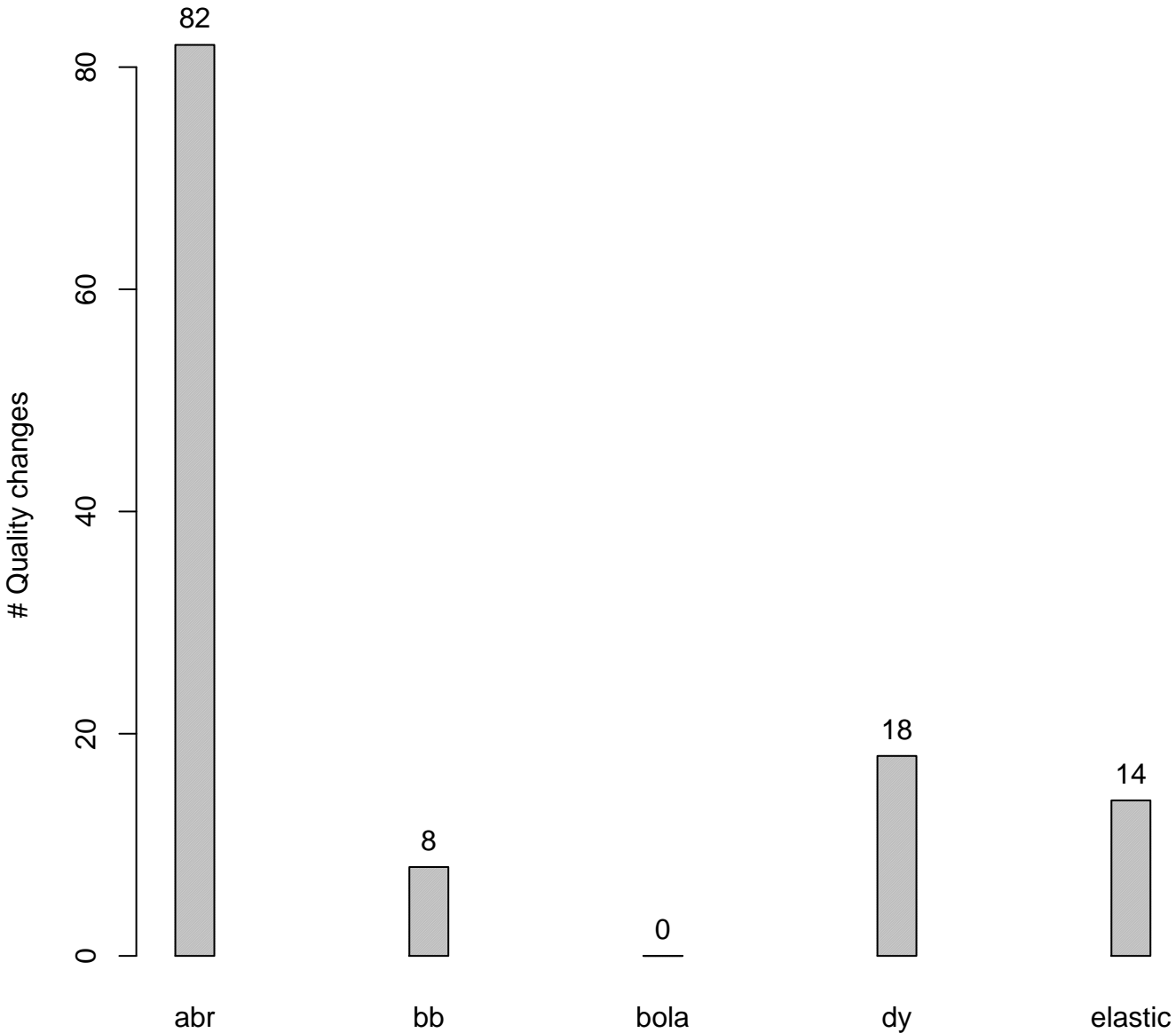**Network profile: p2 Sample: t2 Metric: # quality change**
Buffer: 30−60 min: bola

Network profile: p2 Sample: t3 Metric: Avg−Bitrate
Buffer: 30−60   max: bb

Network profile: p2 Sample: t3 Metric: Inefficiency
Buffer: 30−60 min: elastic

Inefficiency

0.495958

0.290454

0.227514

0.245689

0.212224

abr   bb   bola   dy   elastic

Network profile: p2 Sample: t3 Metric: # quality change
Buffer: 30−60 min: bola

Network profile: p2 Sample: t4 Metric: Avg−Bitrate
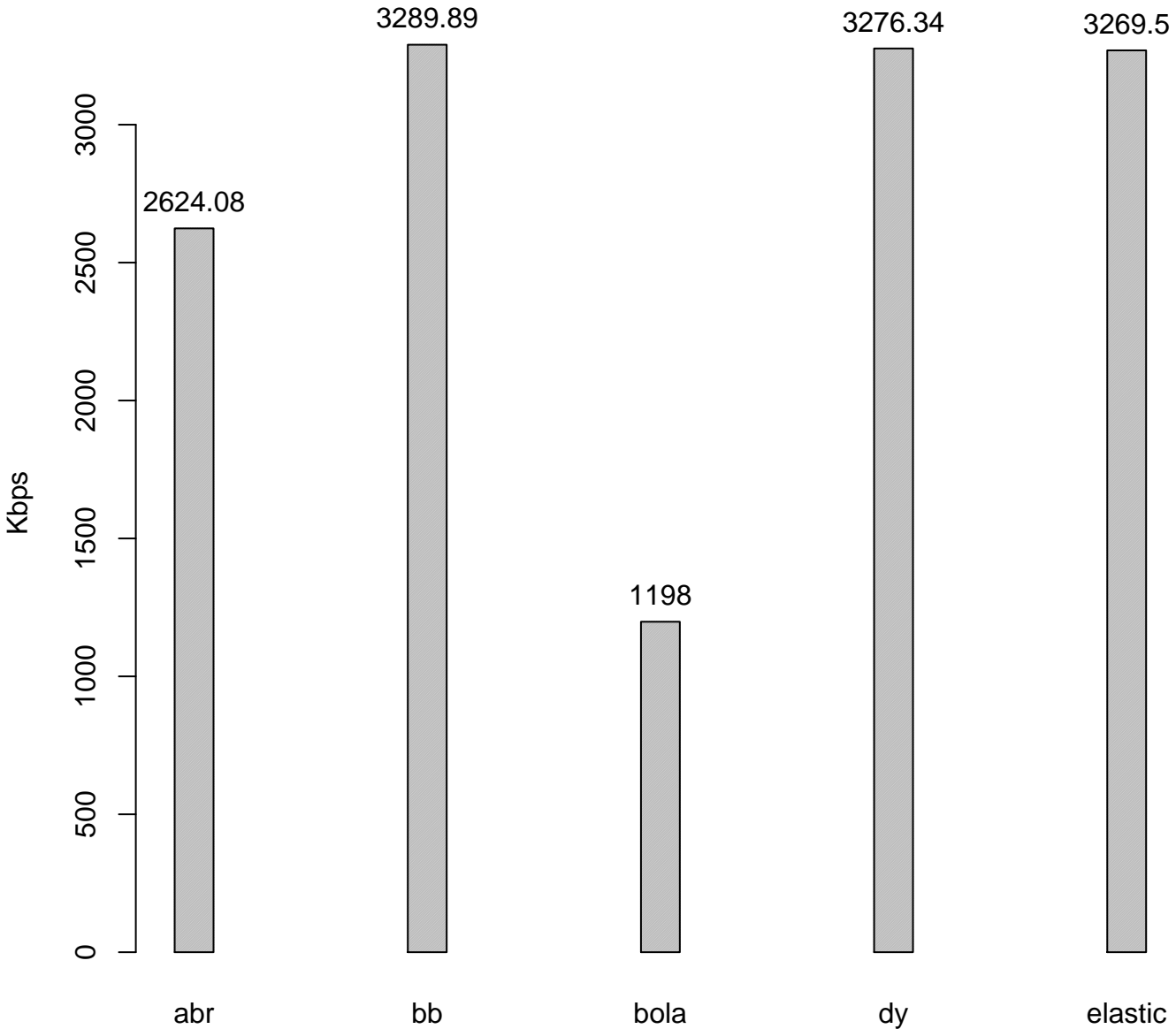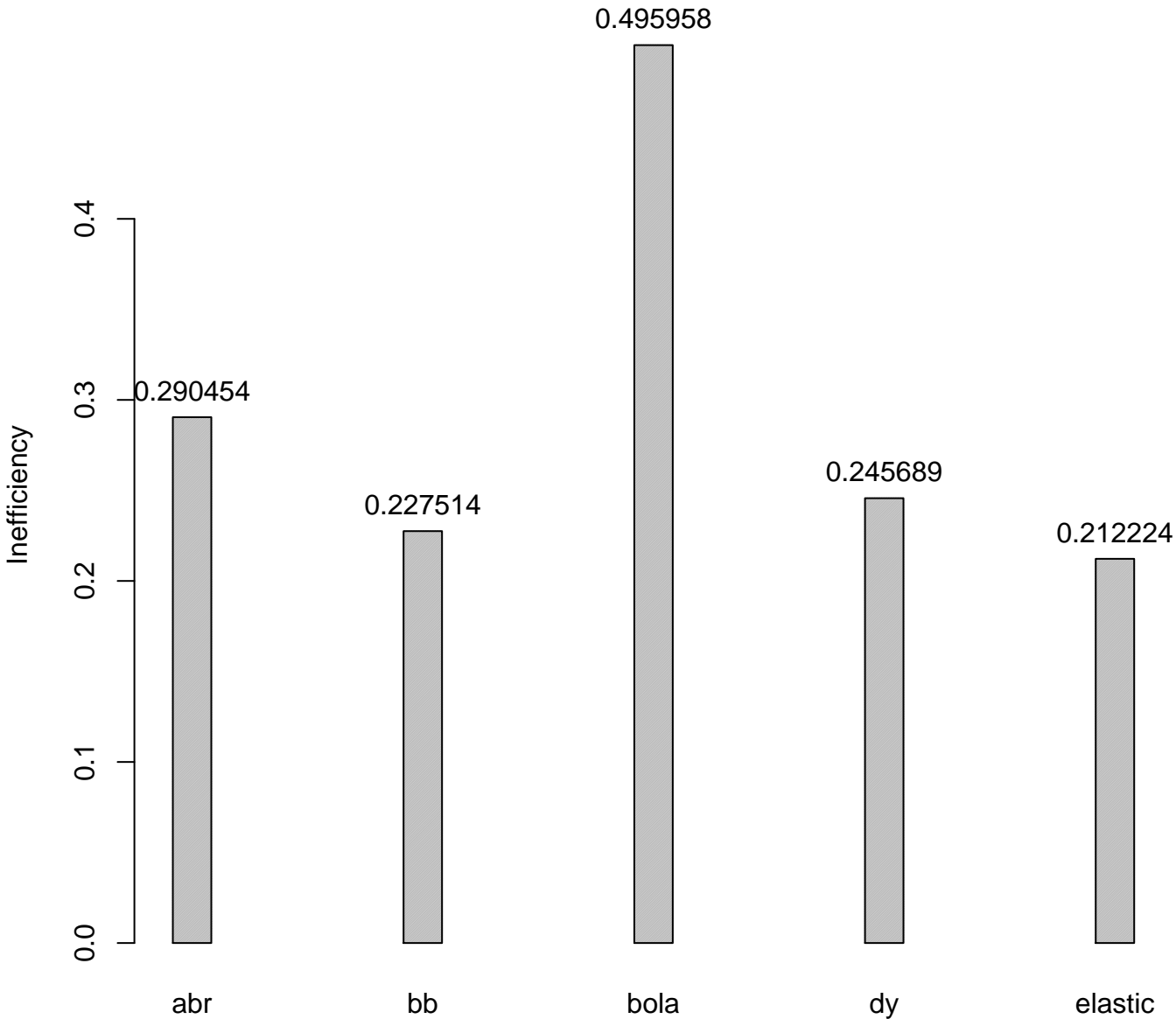**Buffer: 30−60 max: dy**

Network profile: p2 Sample: t4 Metric: Inefficiency
Buffer: 30−60 min: bb

Network profile: p2 Sample: t4 Metric: # quality change
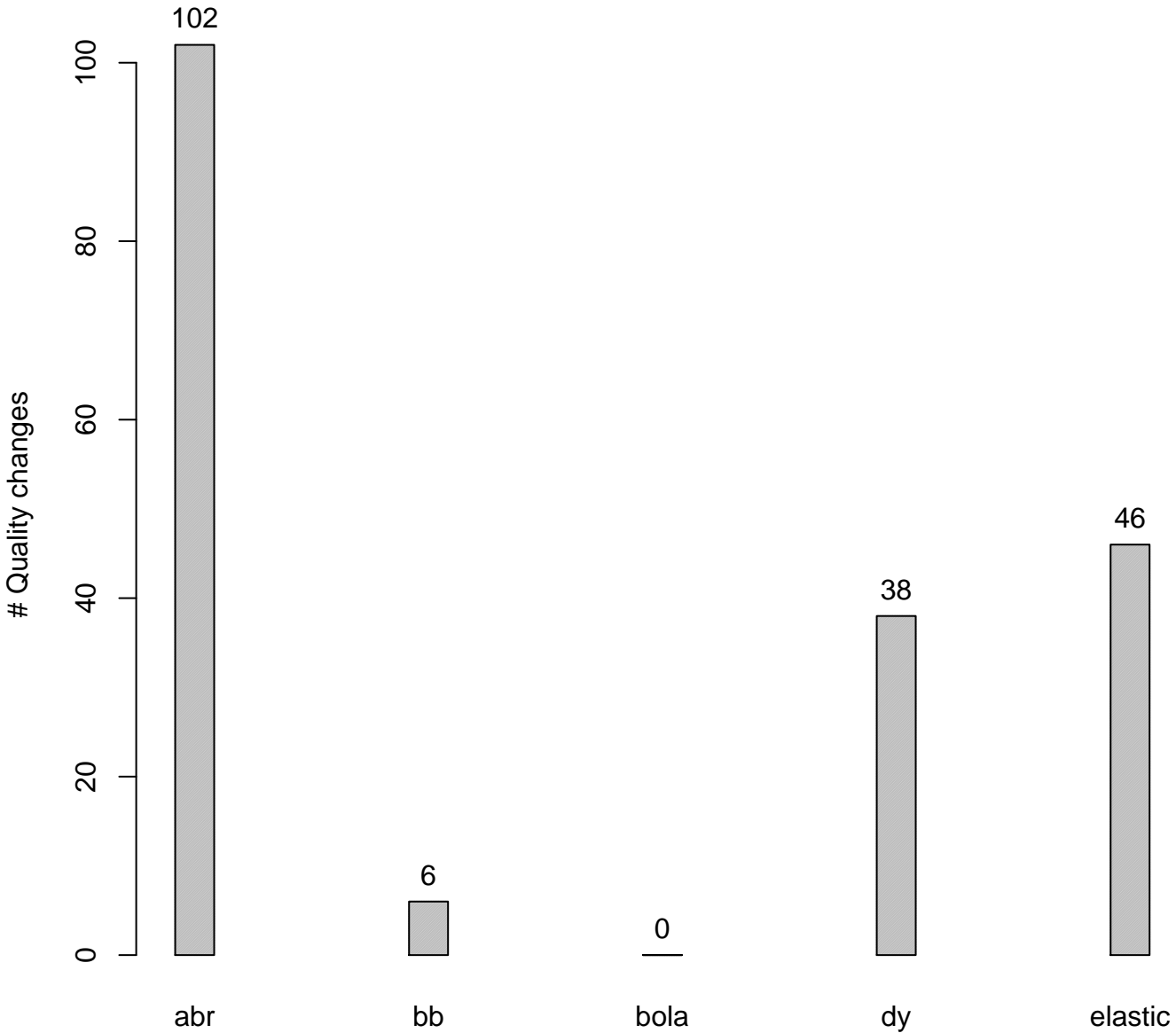**Buffer: 30–60 min: bola**

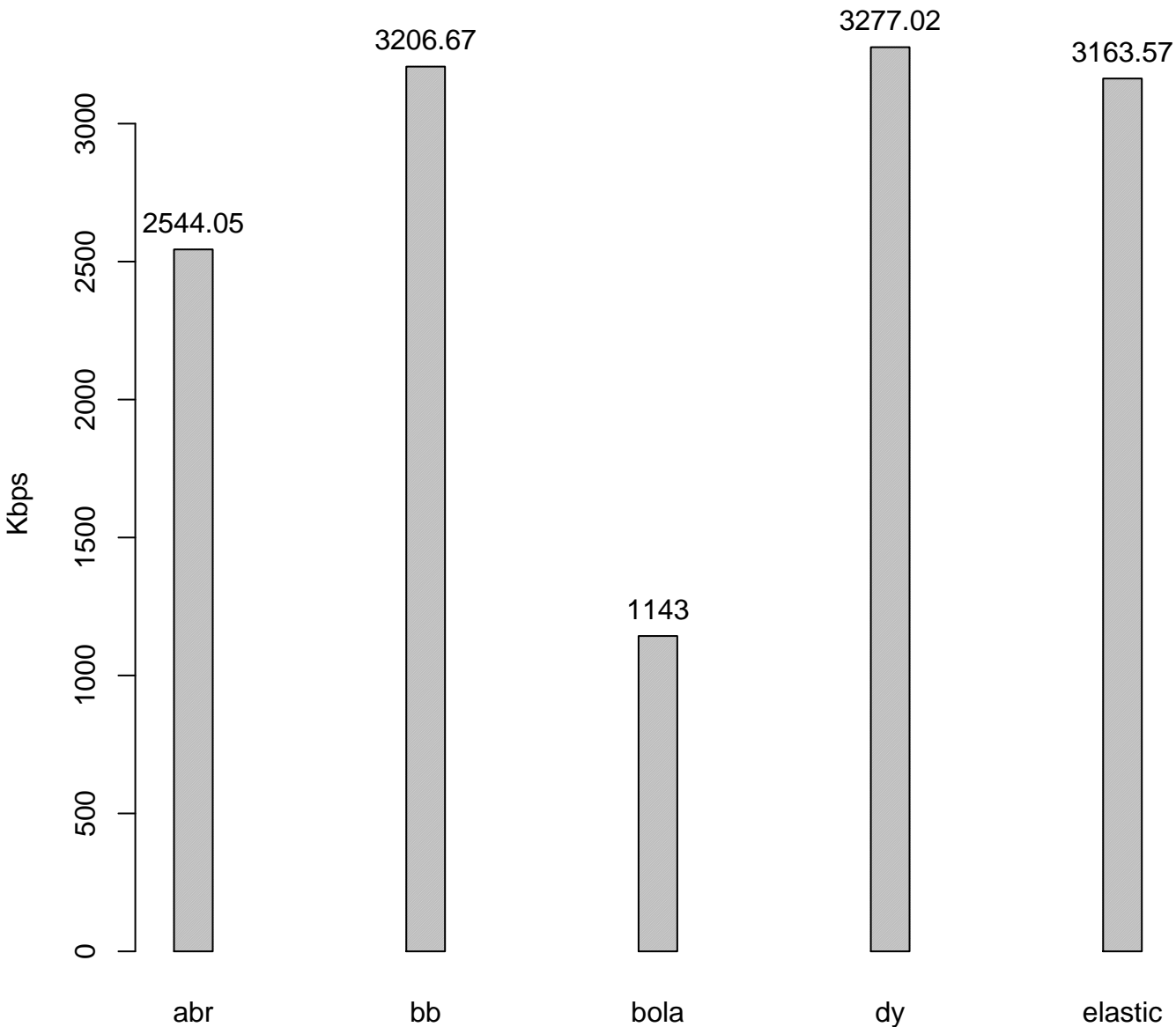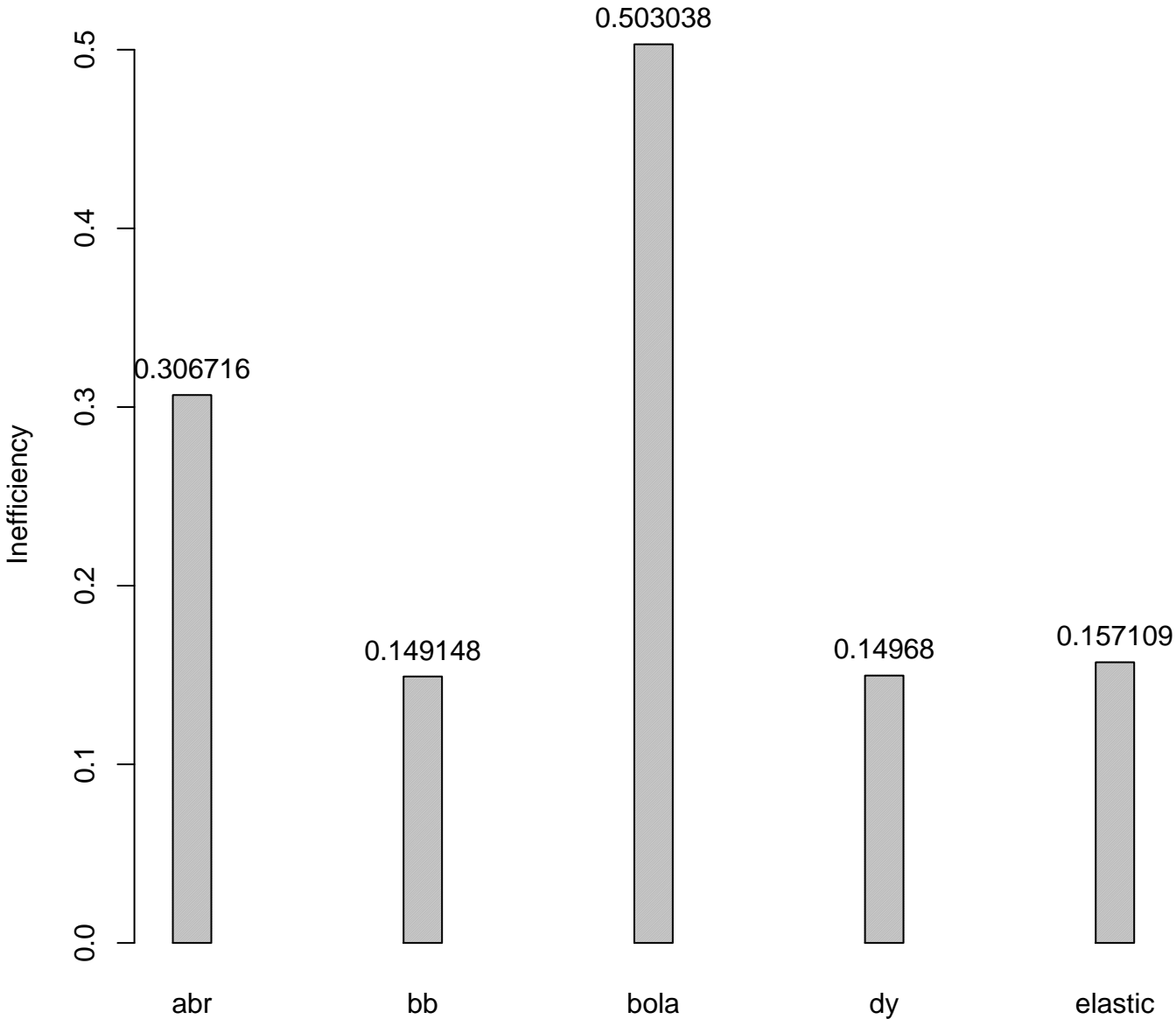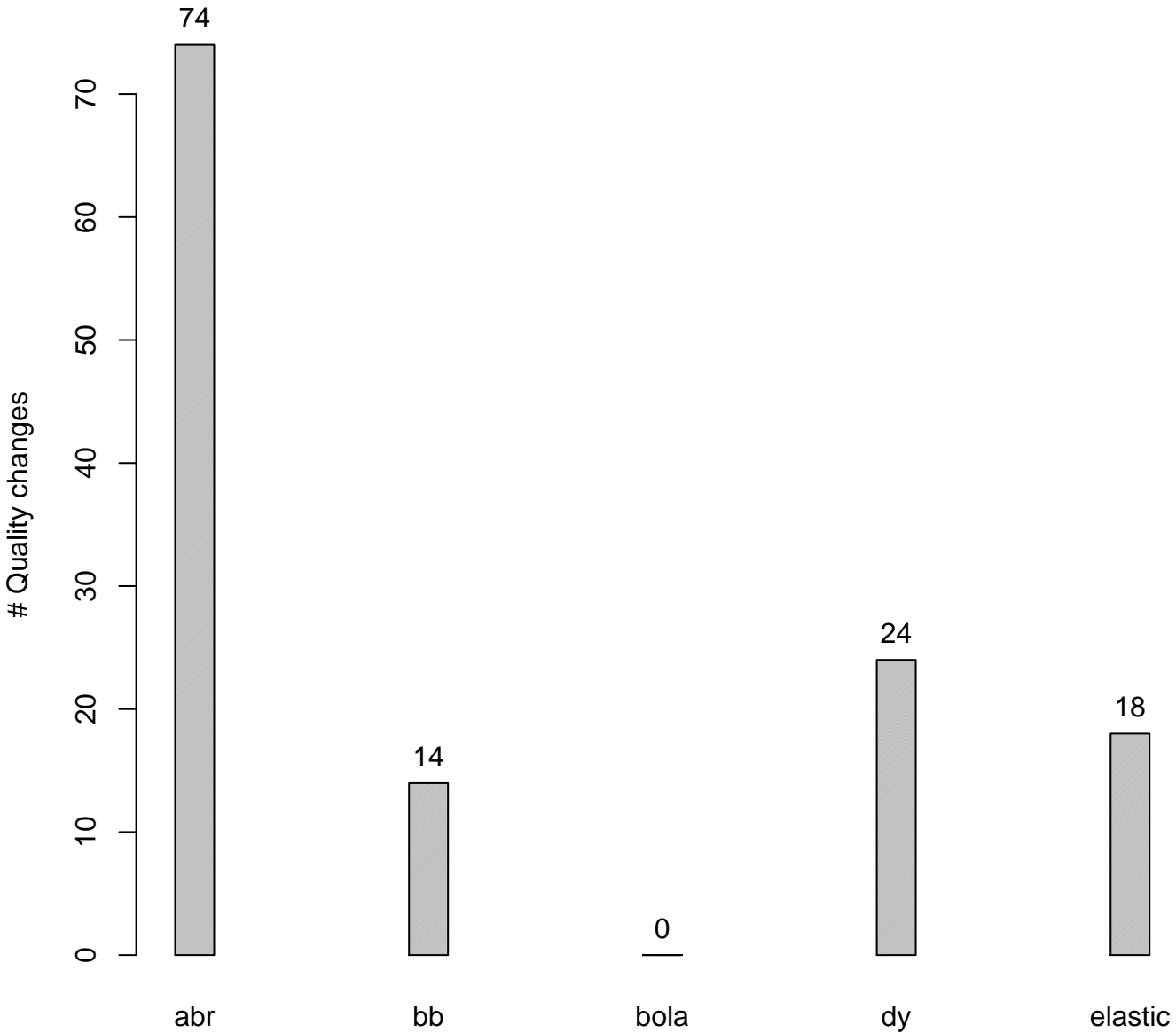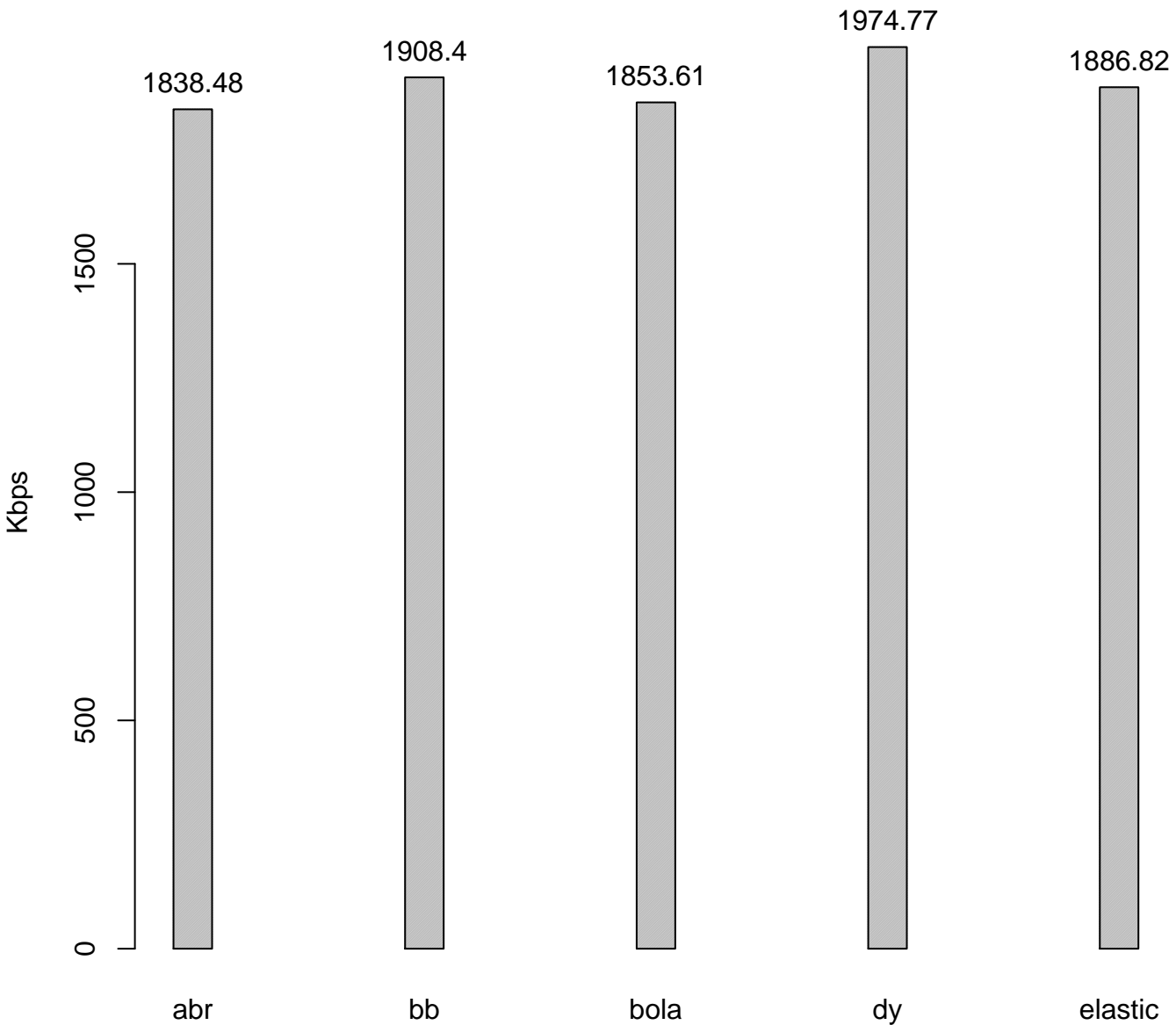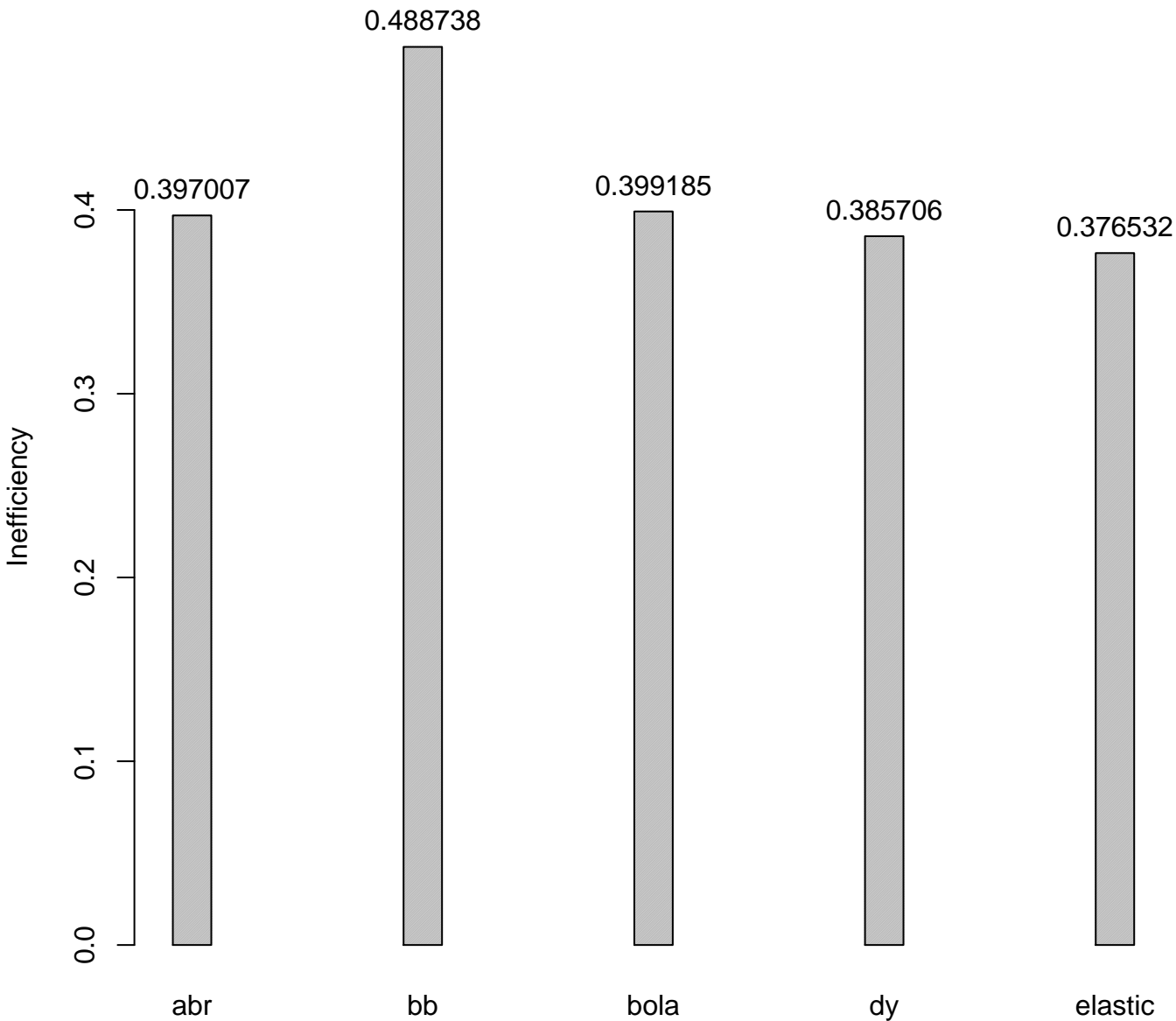**Network profile: p2 Sample: t5 Metric: Avg−Bitrate**
Buffer: 30−60 max: dy

Network profile: p2 Sample: t5 Metric: Inefficiency
Buffer: 30–60 min: elastic

Inefficiency (y-axis)

abr	bb	bola	dy	elastic
0.397007	0.488738	0.399185	0.385706	0.376532

Network profile: p2 Sample: t5 Metric: # quality change
Buffer: 30−60 min: abr

Quality changes

Network profile: p2 Sample: t6 Metric: Avg−Bitrate
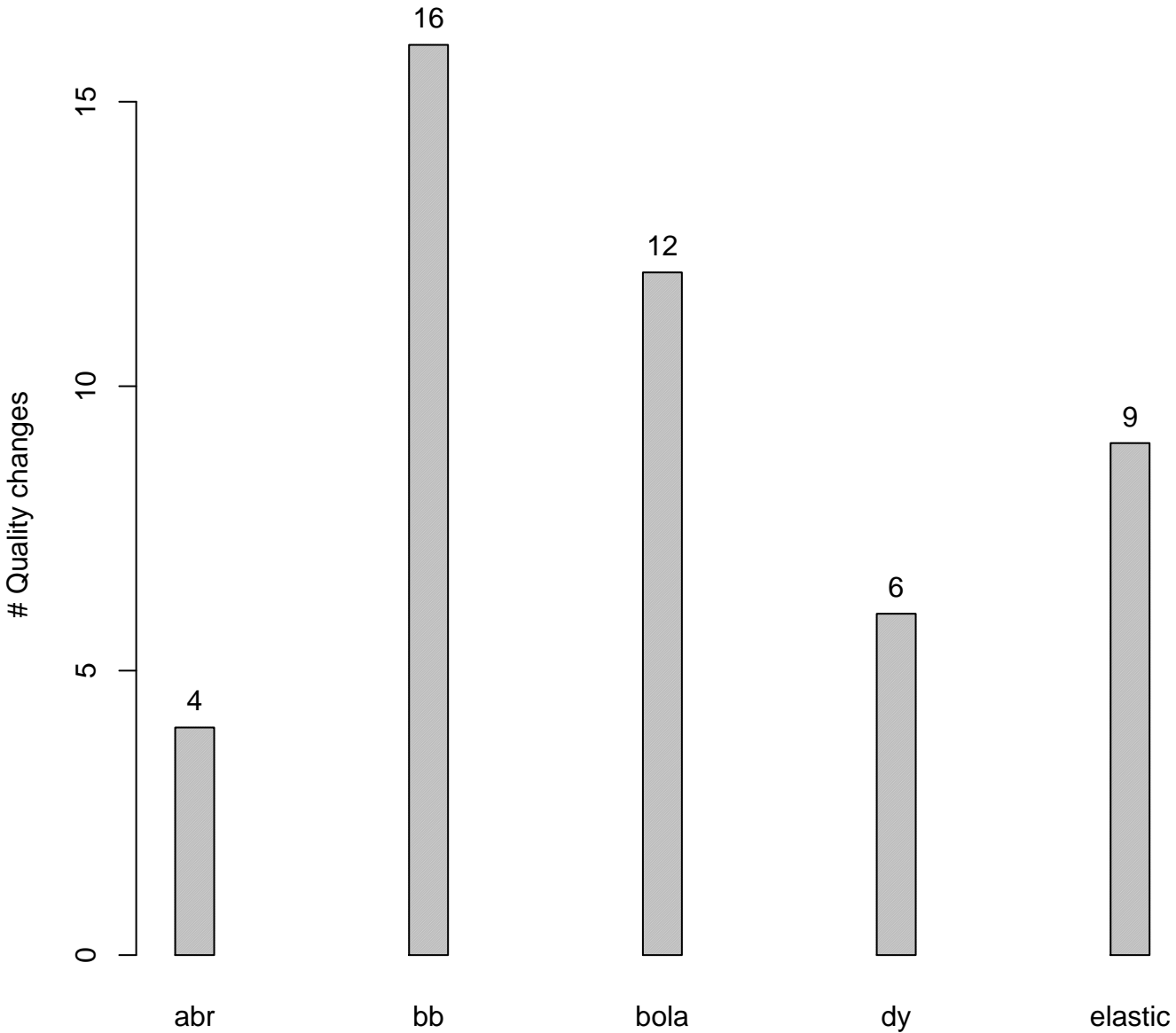**Buffer: 30−60   max: bb**

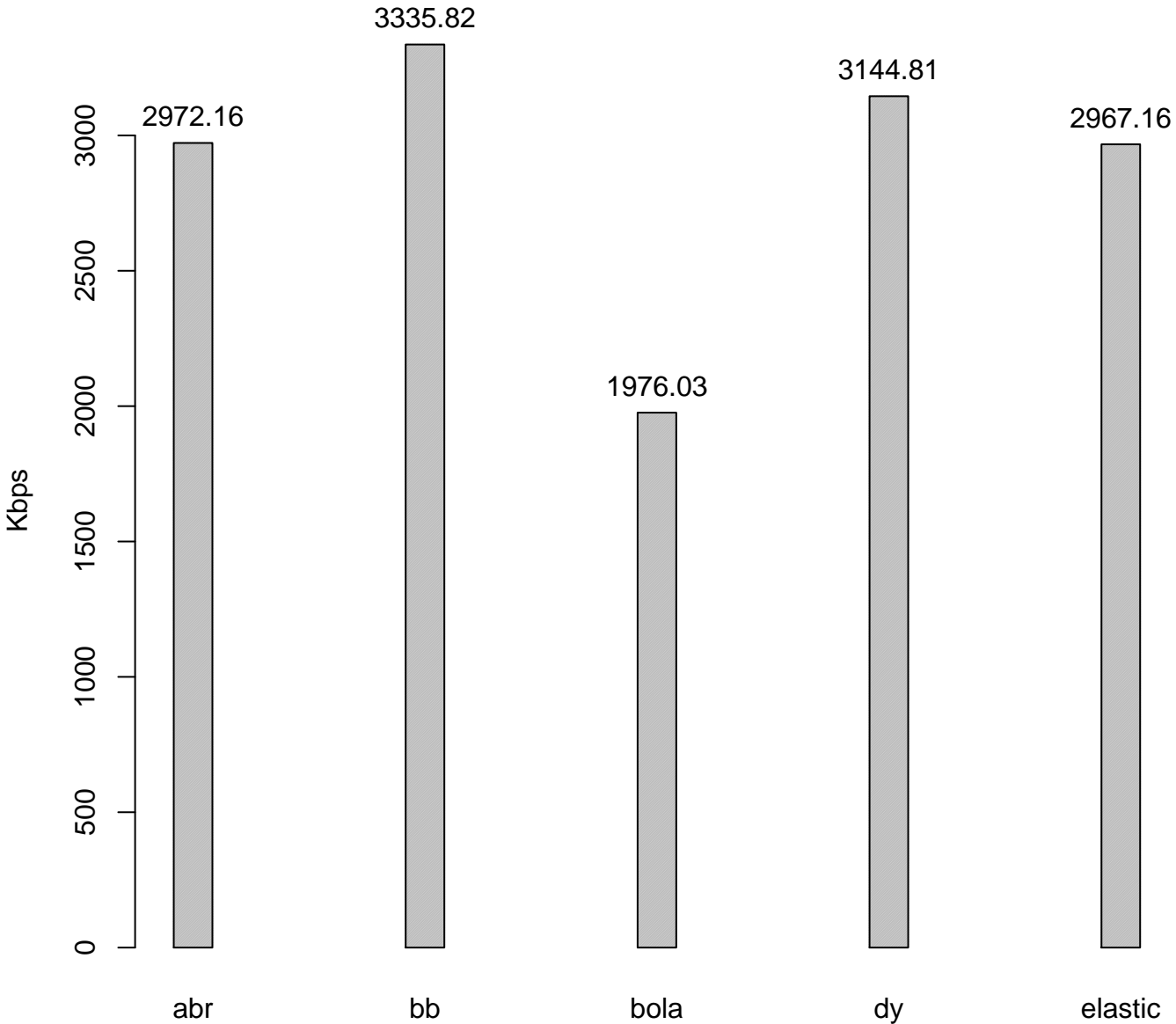**Network profile: p2 Sample: t6 Metric: Inefficiency**
Buffer: 30−60 min: elastic

Network profile: p2 Sample: t6 Metric: # quality change
Buffer: 30–60 min: bb

Network profile: p2 Sample: t7 Metric: Avg−Bitrate
Buffer: 30−60 max: bb

Network profile: p2 Sample: t7 Metric: Inefficiency
Buffer: 30−60 min: elastic

Network profile: p2 Sample: t7 Metric: # quality change
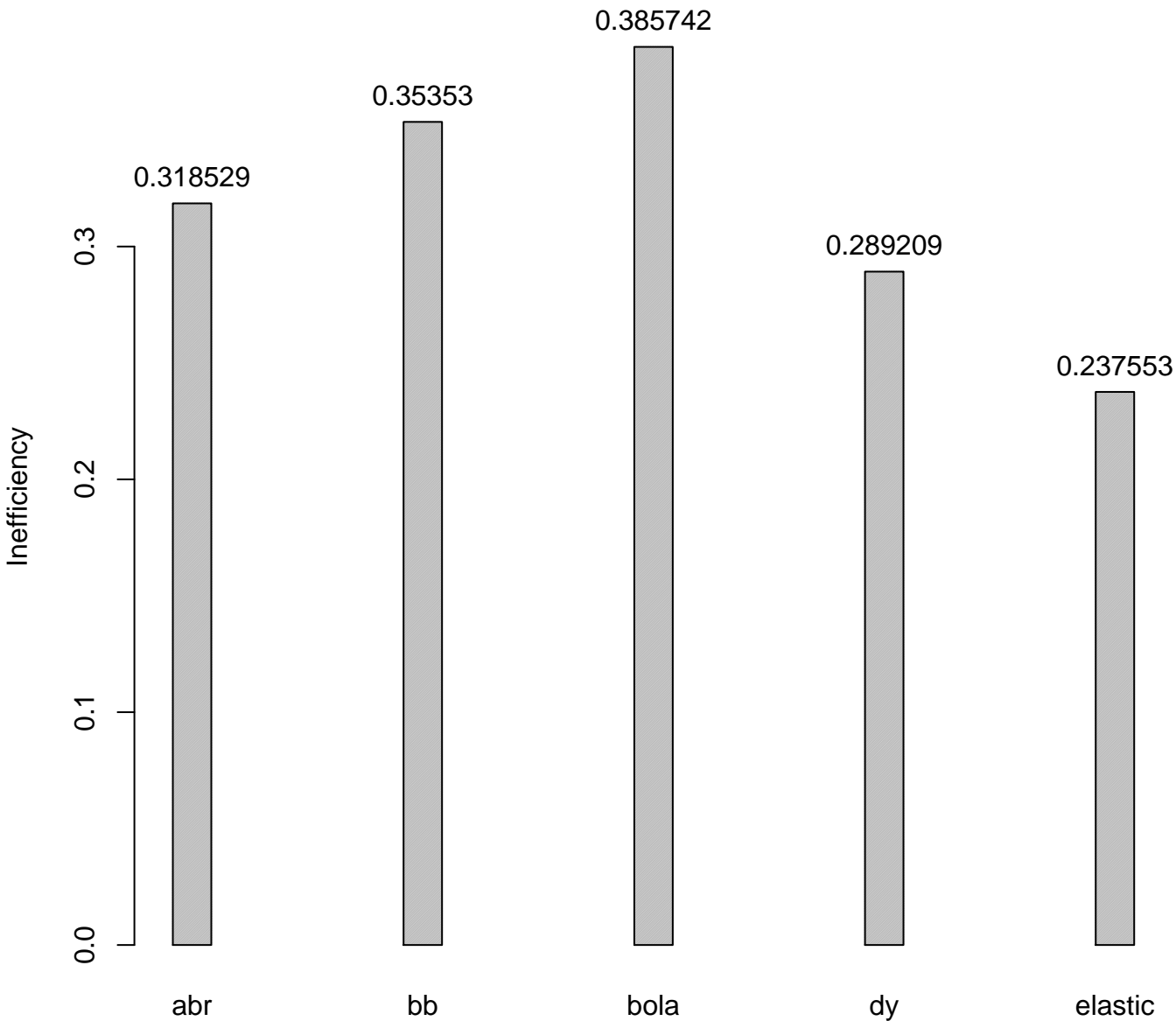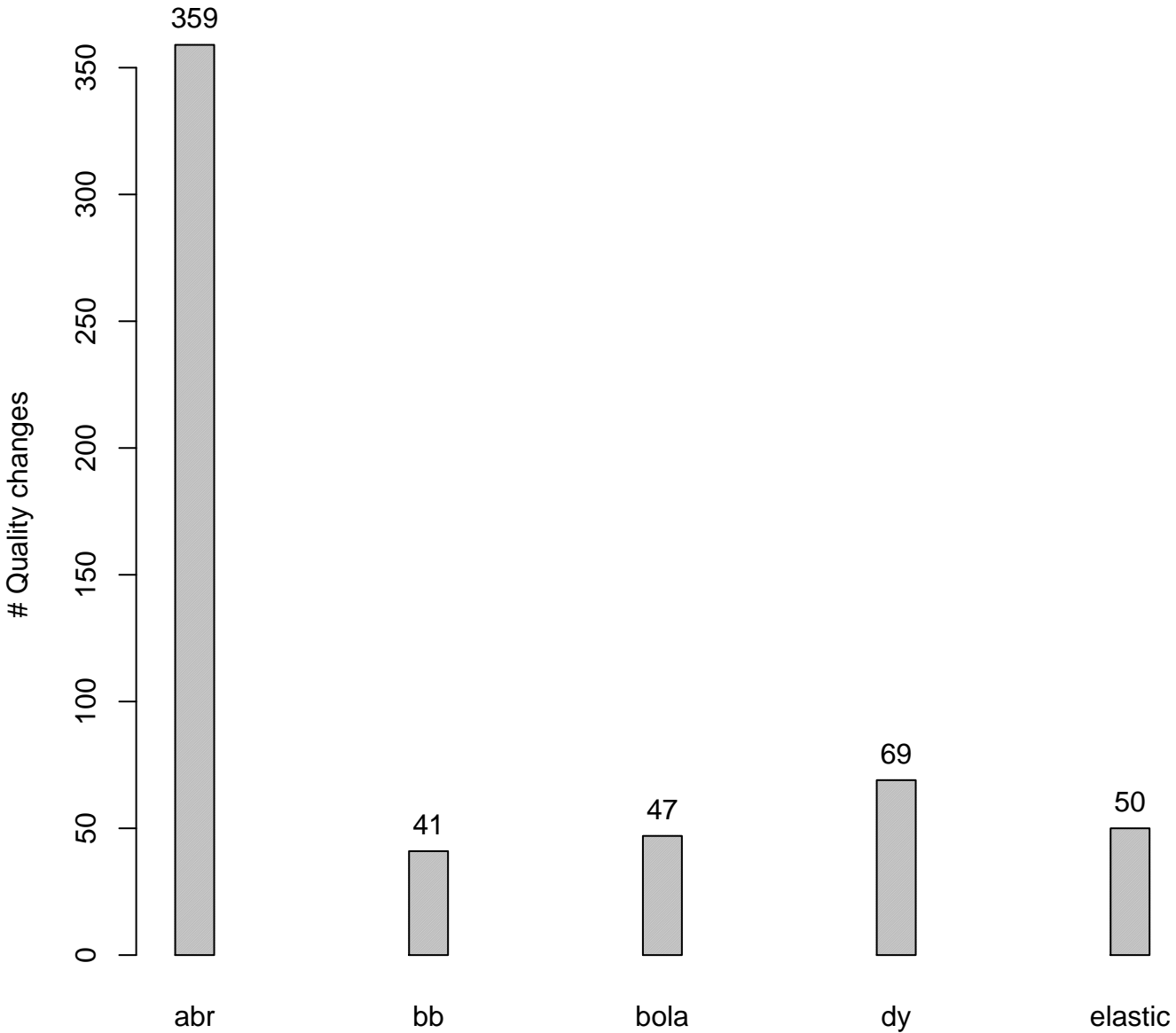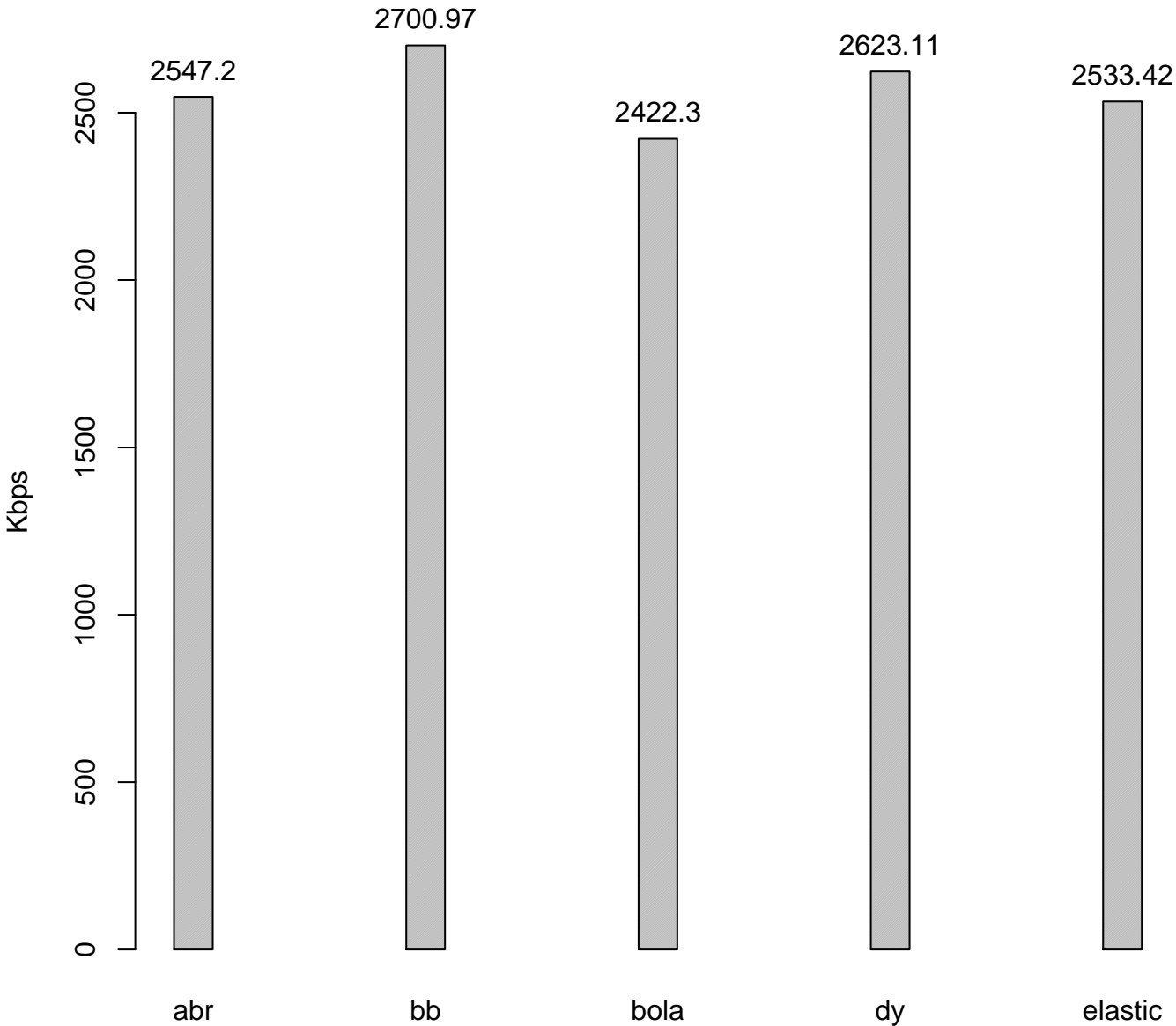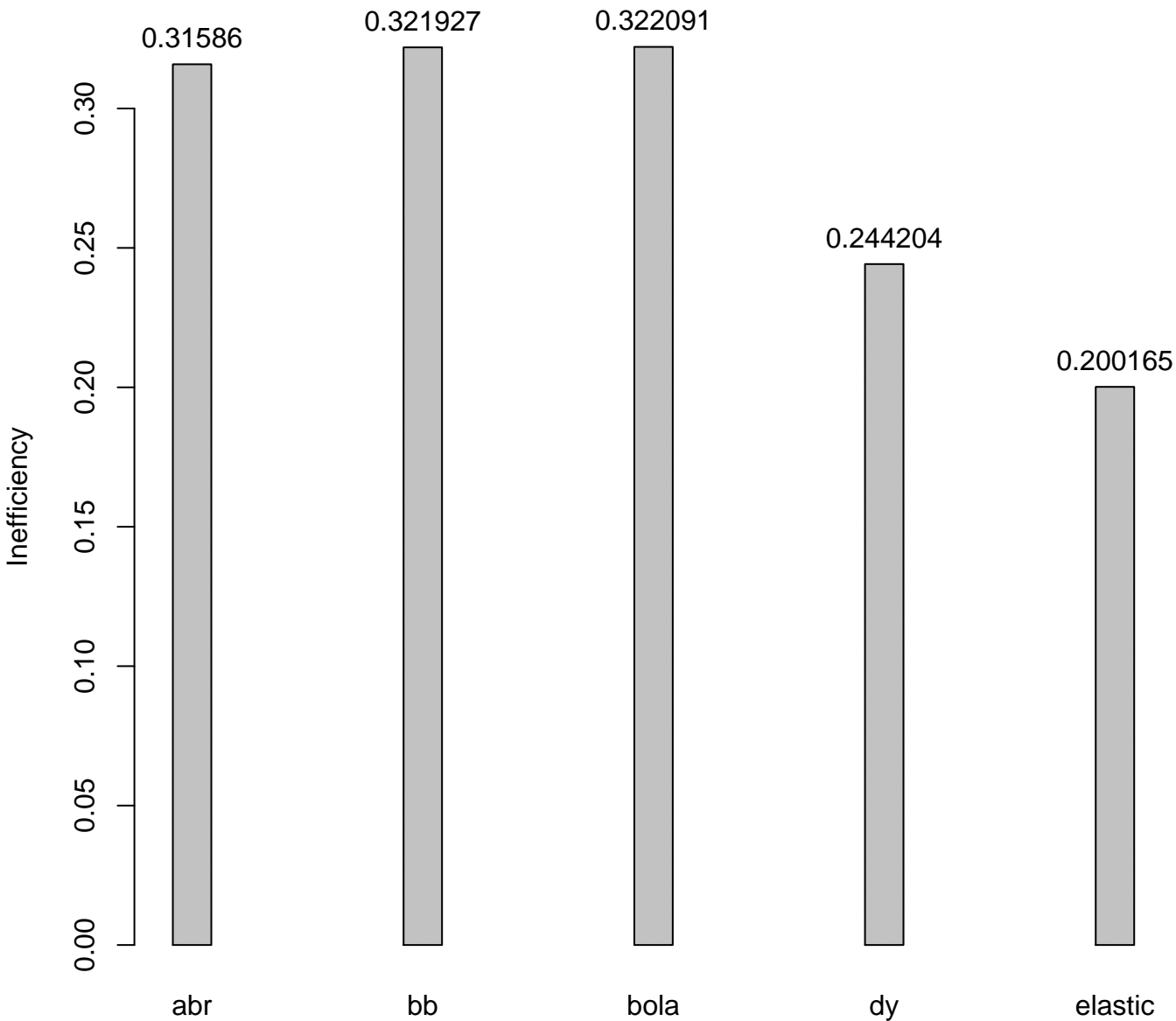**Buffer: 30–60 min: bb**

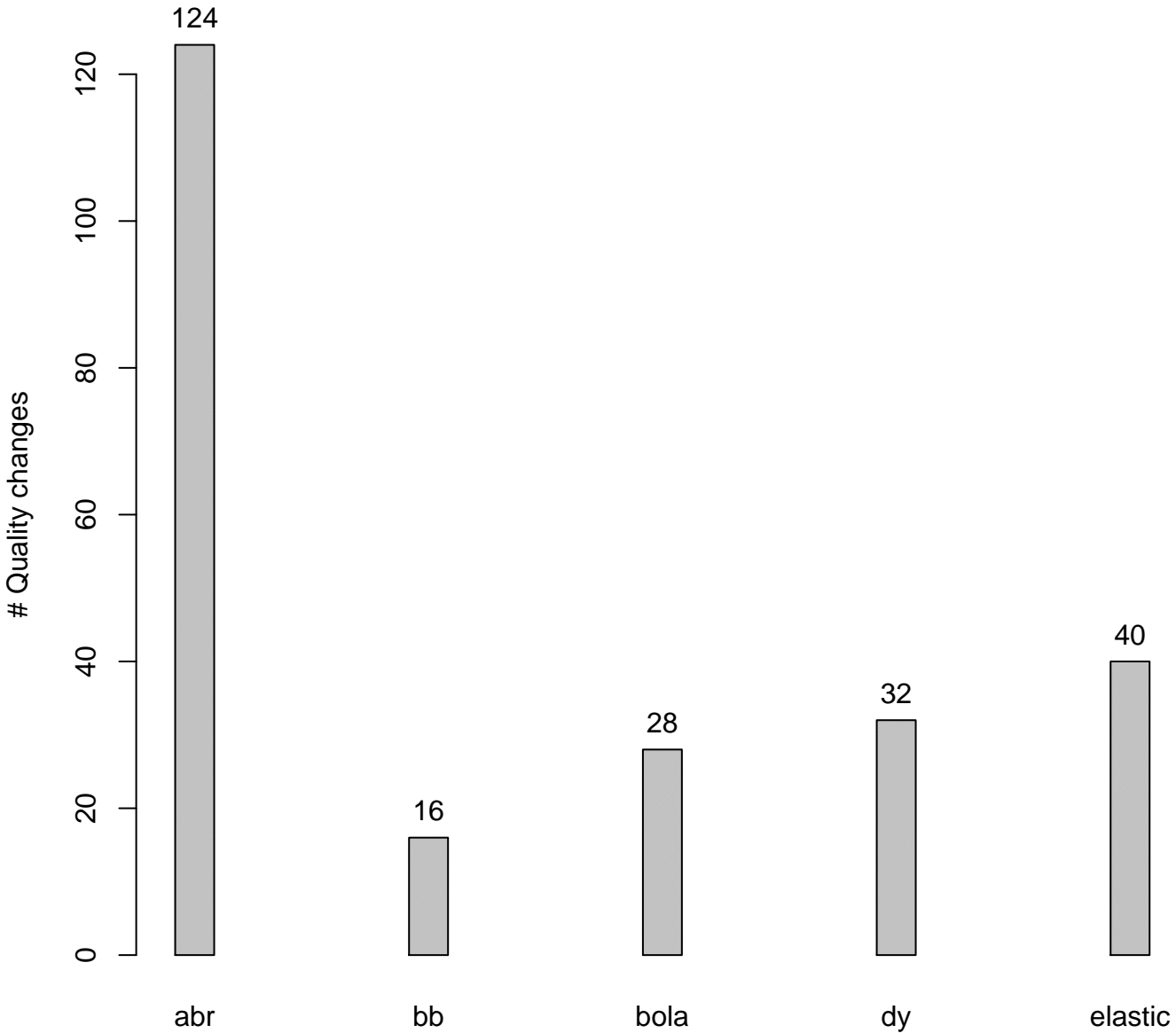**Network profile: p3 Sample: t1 Metric: Avg−Bitrate**
Buffer: 30−60   max: dy

Kbps

1551.67

1904.97

1200

1908.61

1812.58

abr   bb   bola   dy   elastic

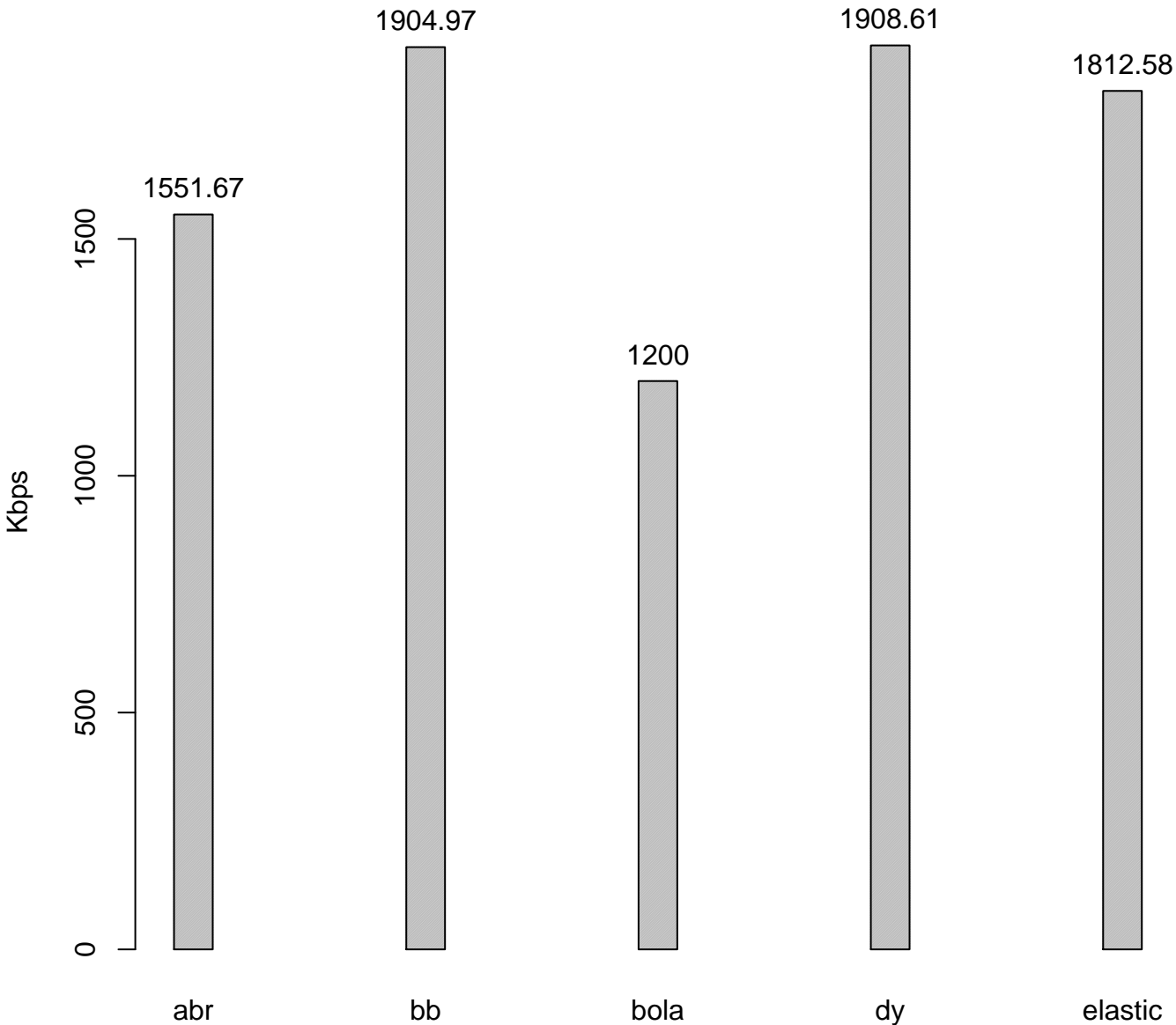**Network profile: p3 Sample: t1 Metric: Inefficiency**
Buffer: 30−60 min: elastic

Network profile: p3 Sample: t1 Metric: # quality change
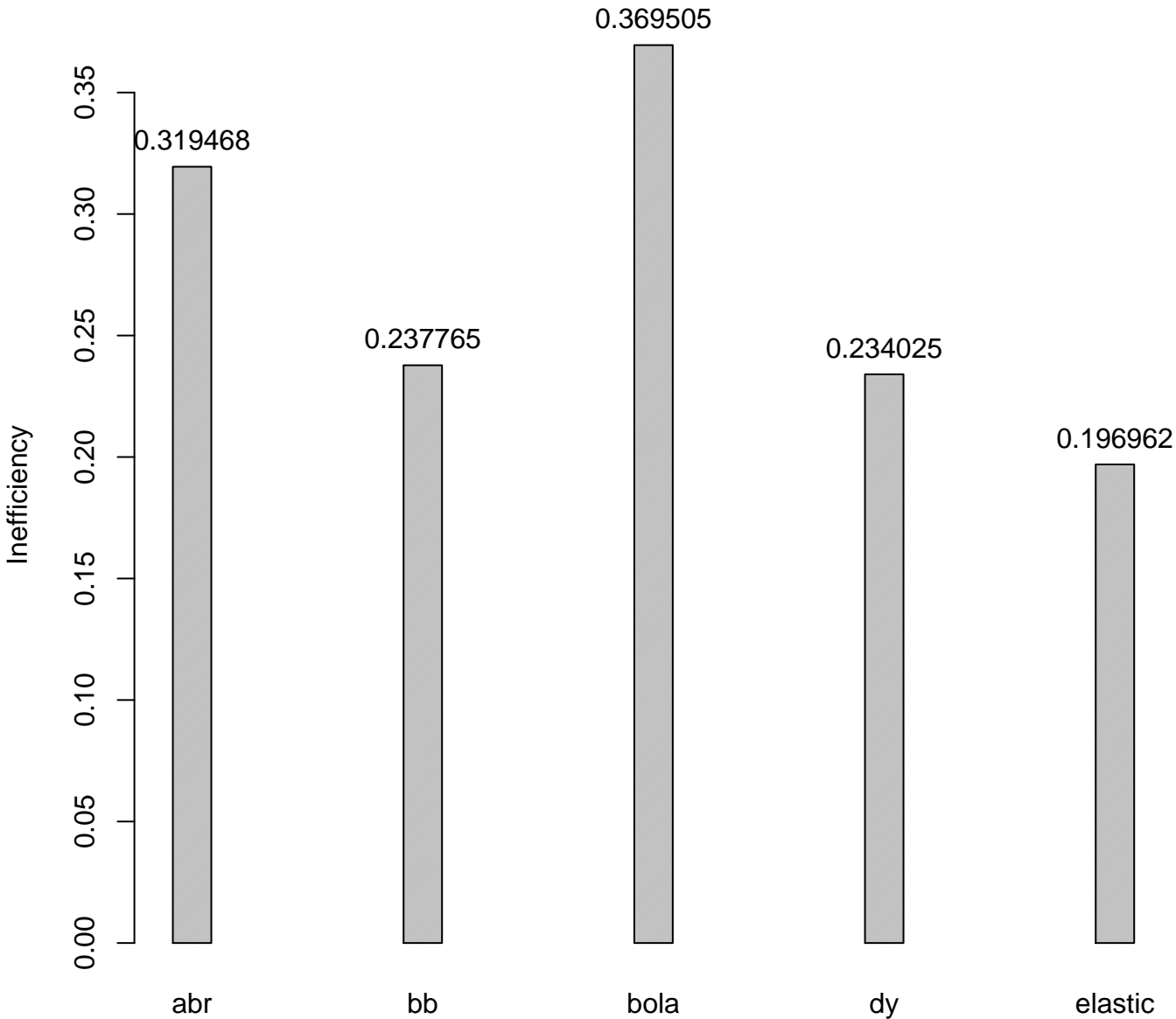**Buffer: 30–60 min: bola**

Network profile: p3 Sample: t2 Metric: Avg−Bitrate
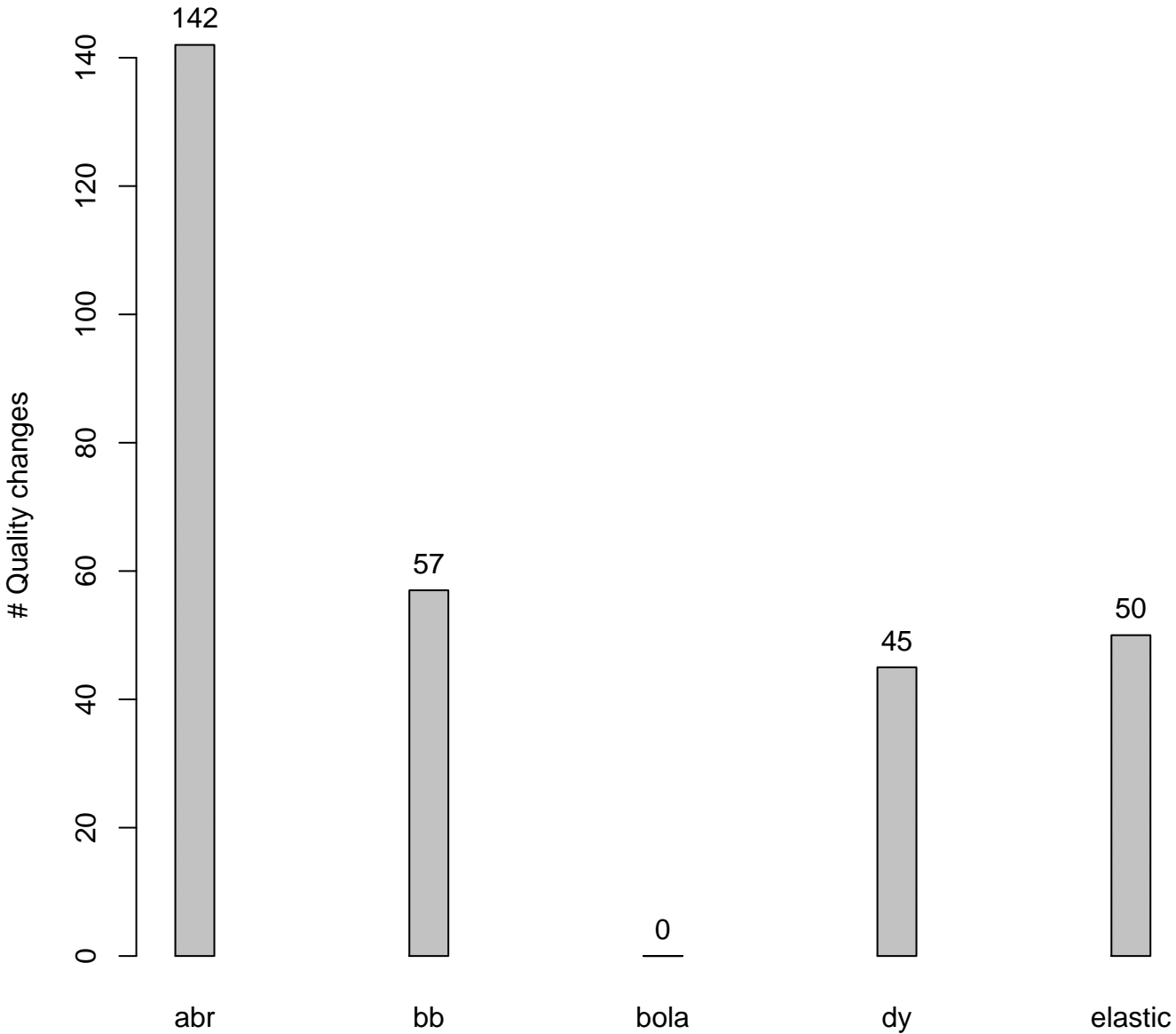**Buffer: 30−60 max: dy**

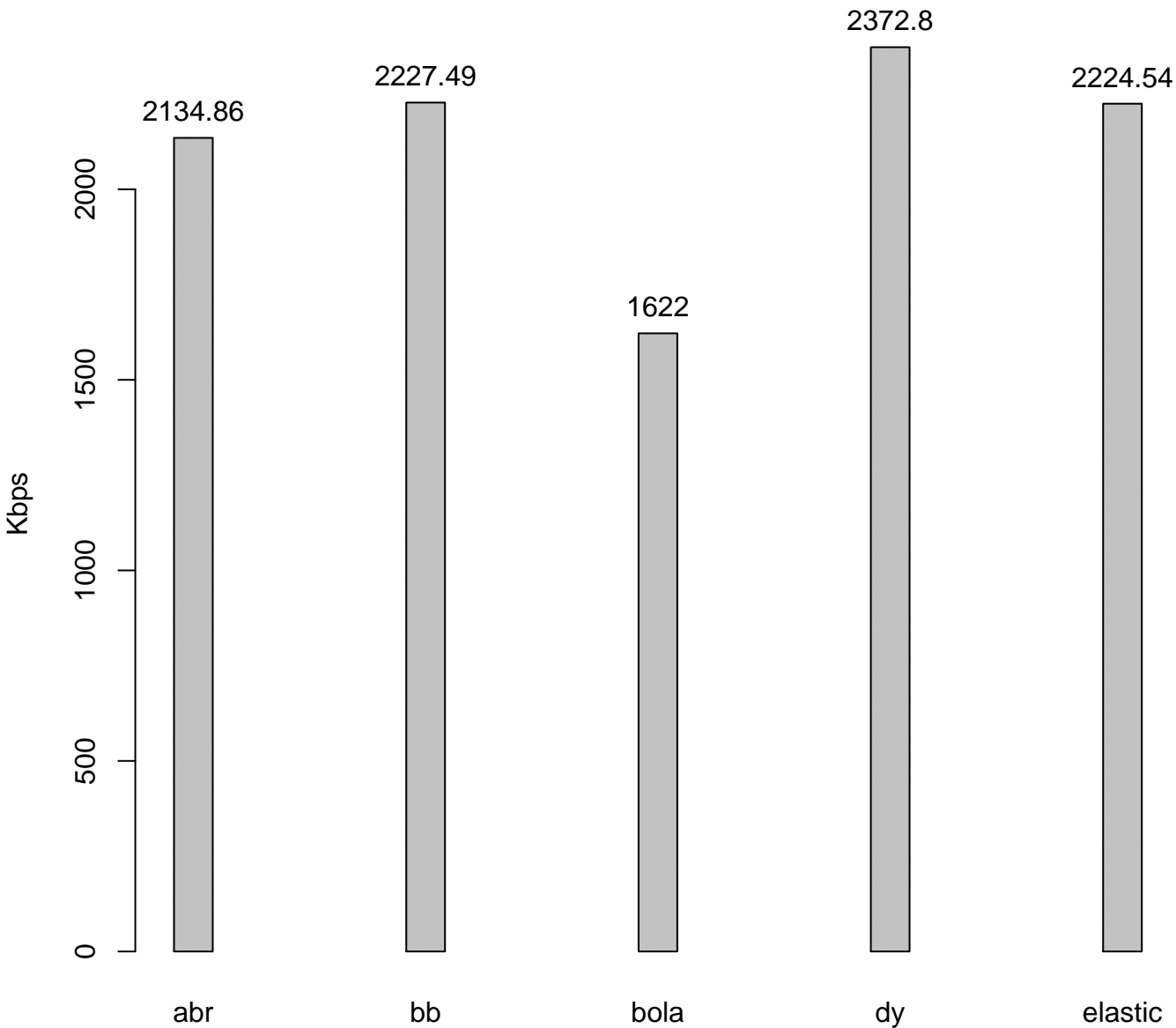**Network profile: p3 Sample: t2 Metric: Inefficiency**
Buffer: 30−60 min: elastic

Network profile: p3 Sample: t2 Metric: # quality change
Buffer: 30−60 min: bola

Network profile: p3 Sample: t3 Metric: Avg−Bitrate
Buffer: 30−60   max: dy

Kbps

Network profile: p3 Sample: t3 Metric: Inefficiency
Buffer: 30−60 min: elastic

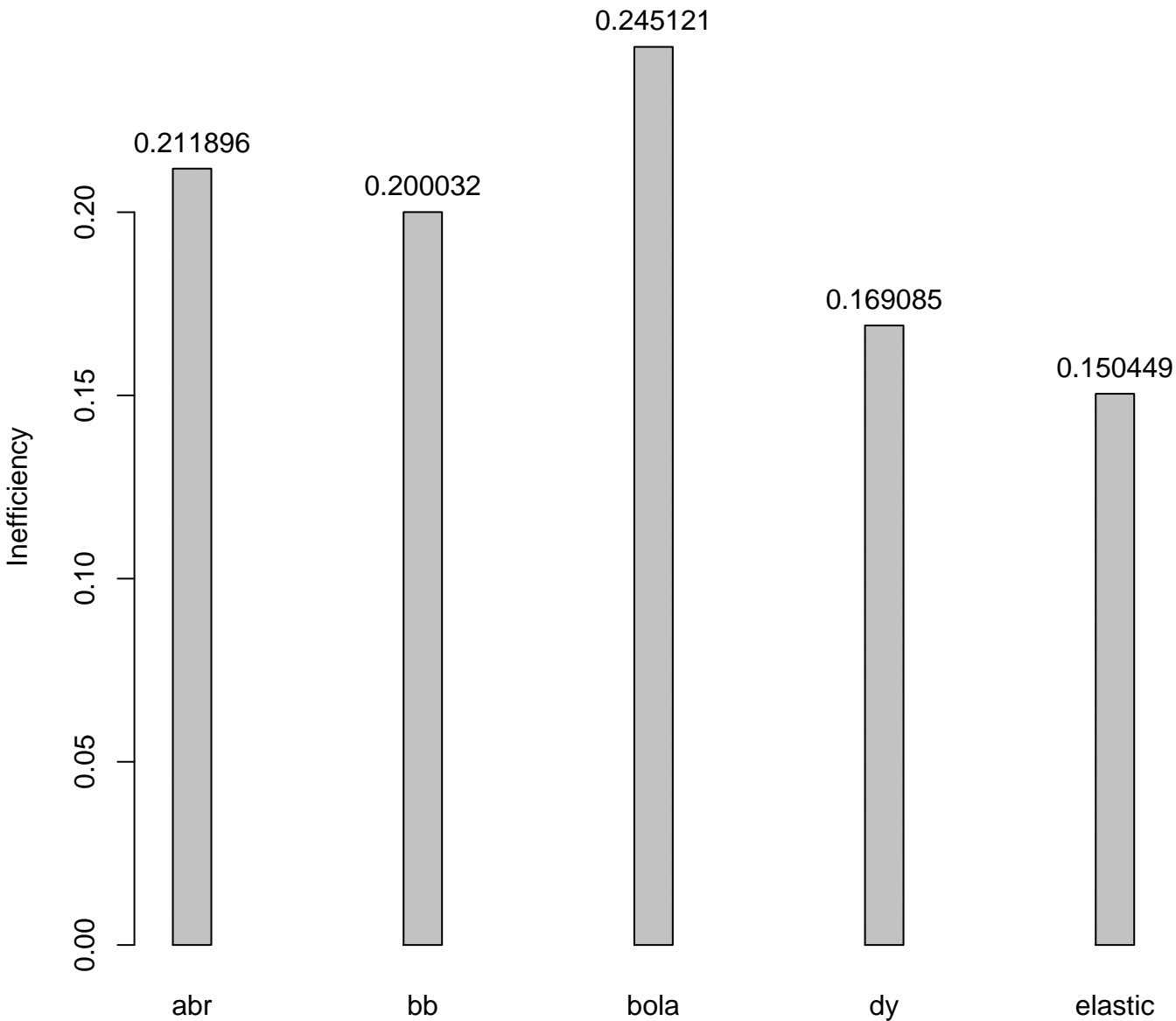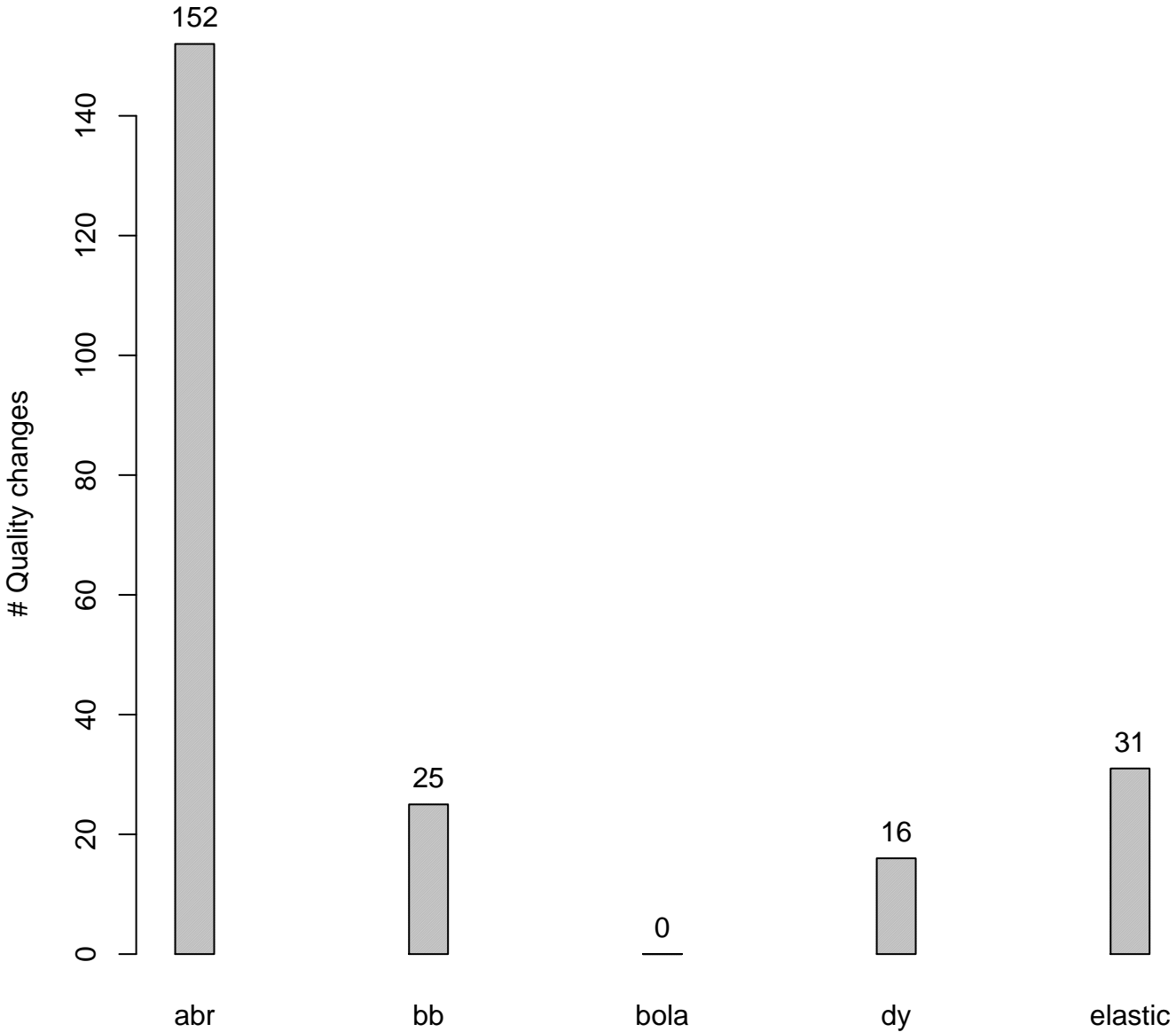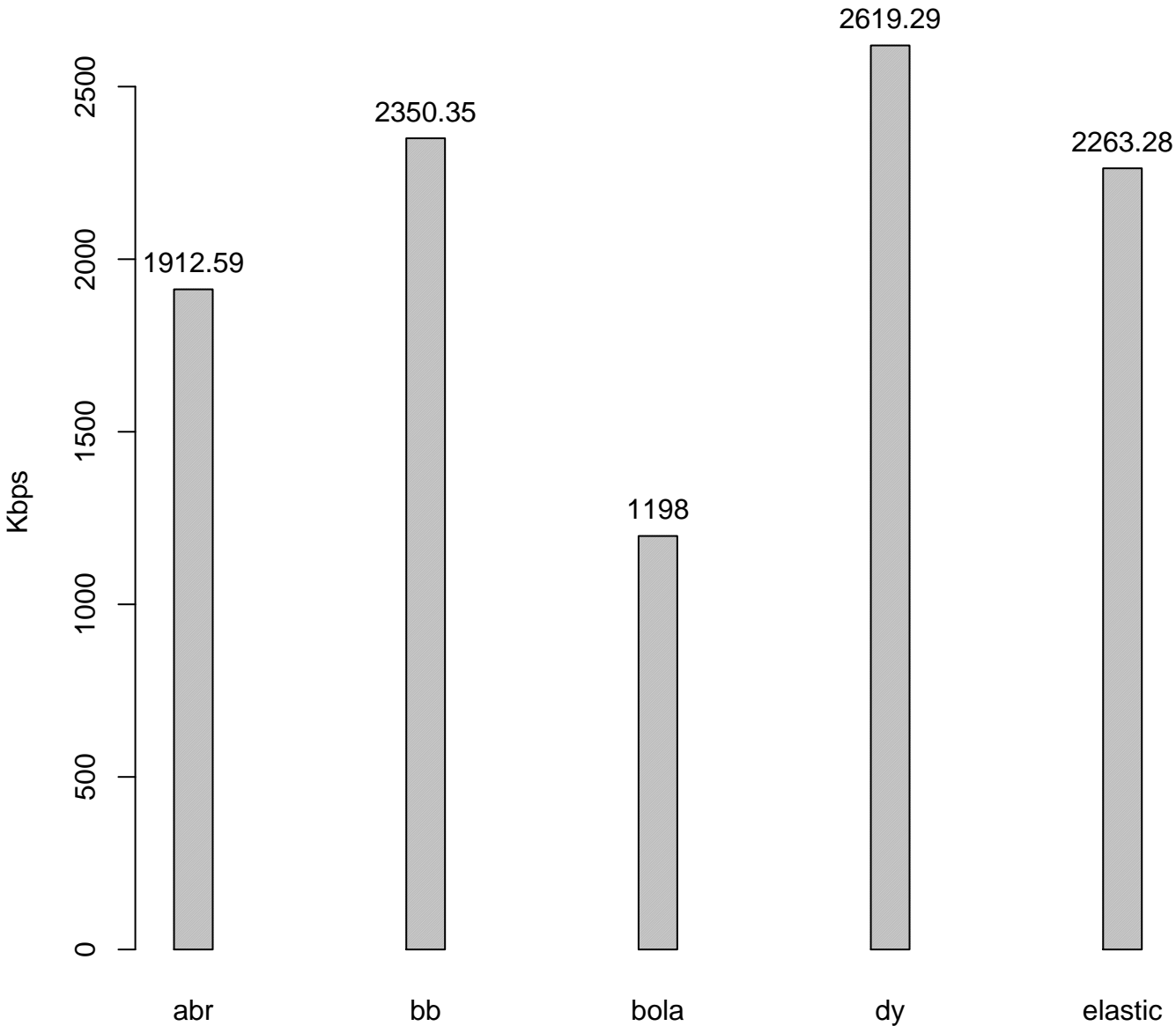**Network profile: p3 Sample: t3 Metric: # quality change**
Buffer: 30−60 min: bola

Quality changes

162

21

0

46

65

abr   bb   bola   dy   elastic

Network profile: p3 Sample: t4 Metric: Avg−Bitrate
Buffer: 30−60 max: dy

Kbps

	1515.65	2233.77	1143	2360.87	1908.44
	abr	bb	bola	dy	elastic

Network profile: p3 Sample: t4 Metric: Inefficiency
Buffer: 30–60 min: dy

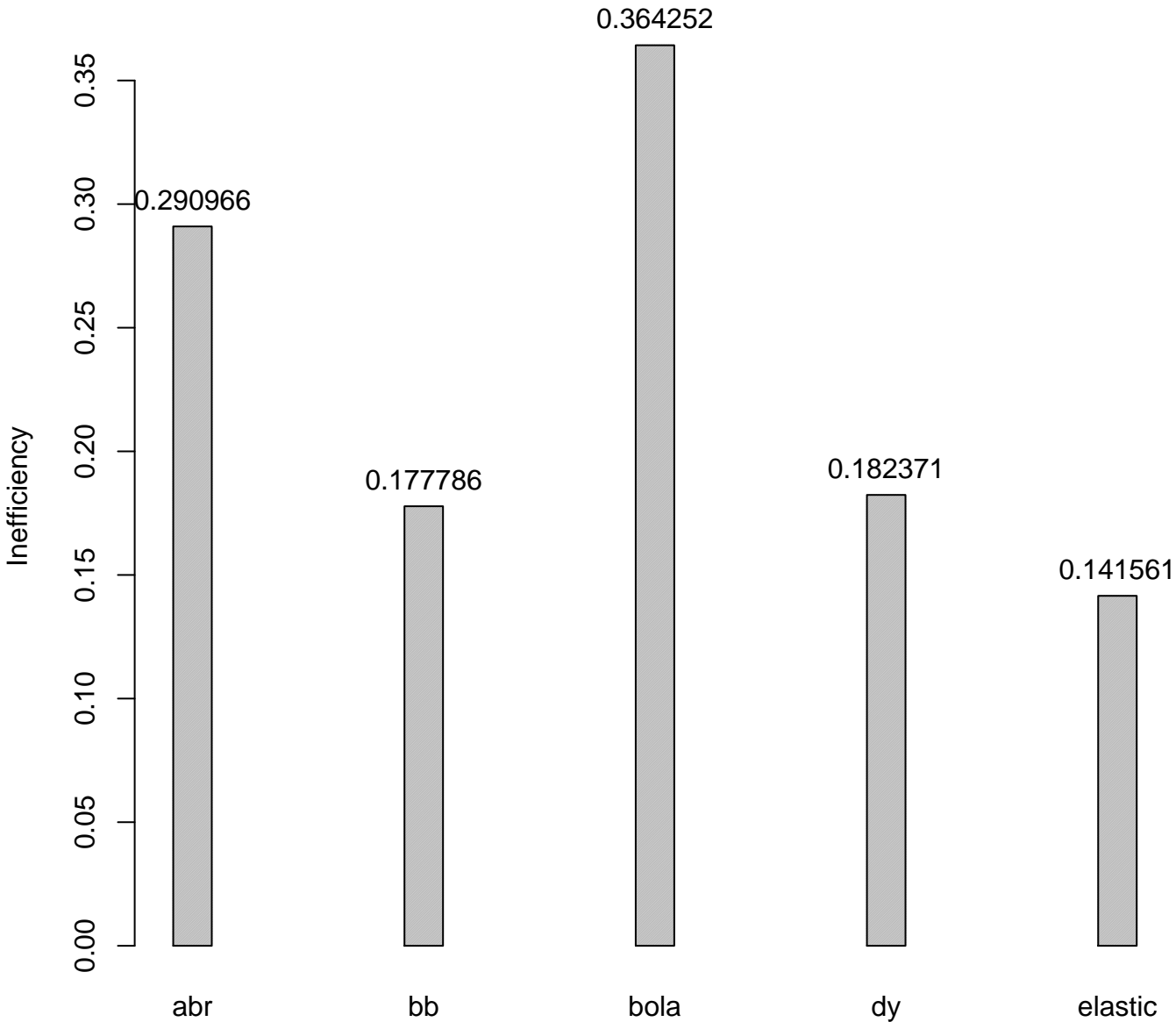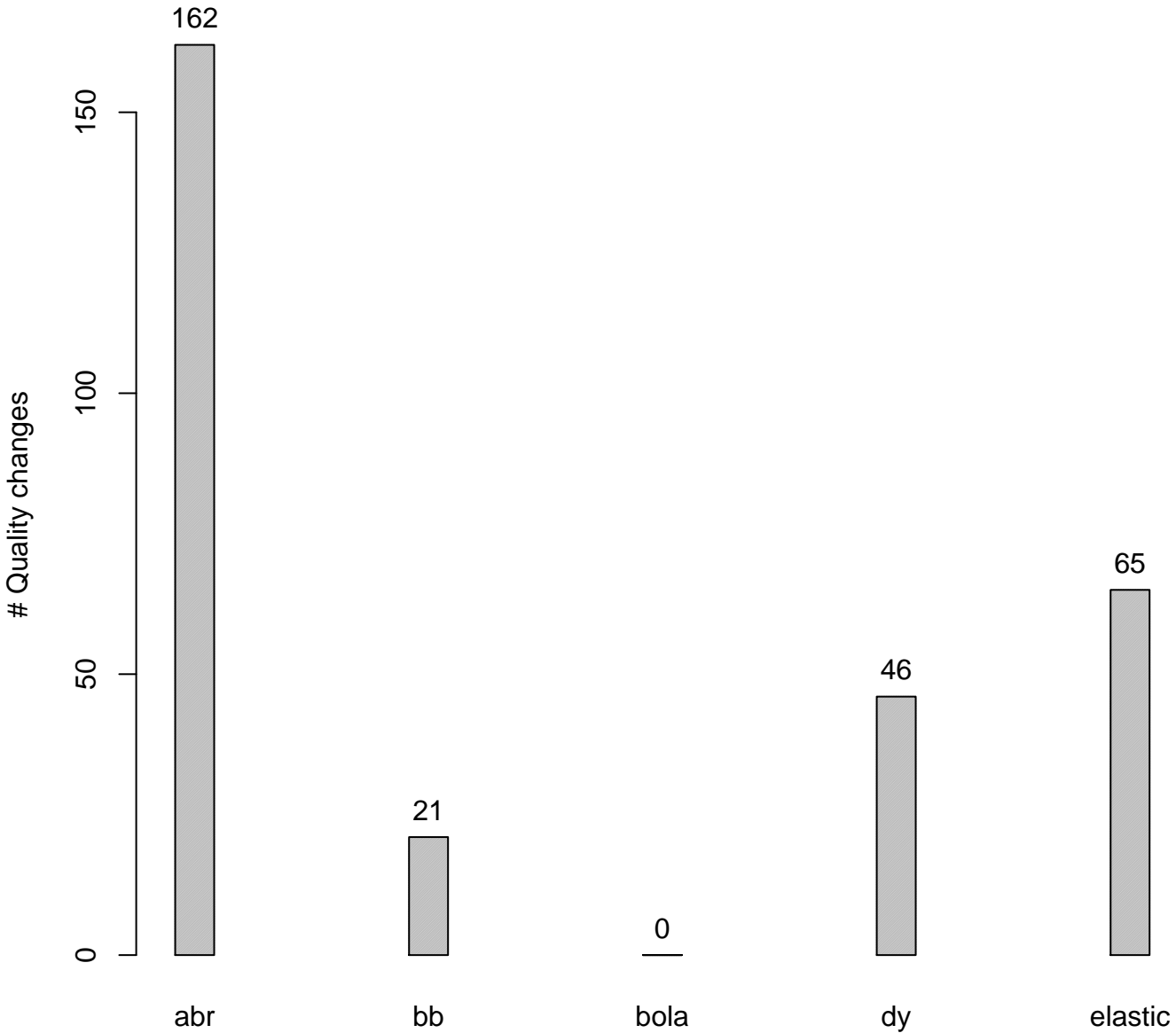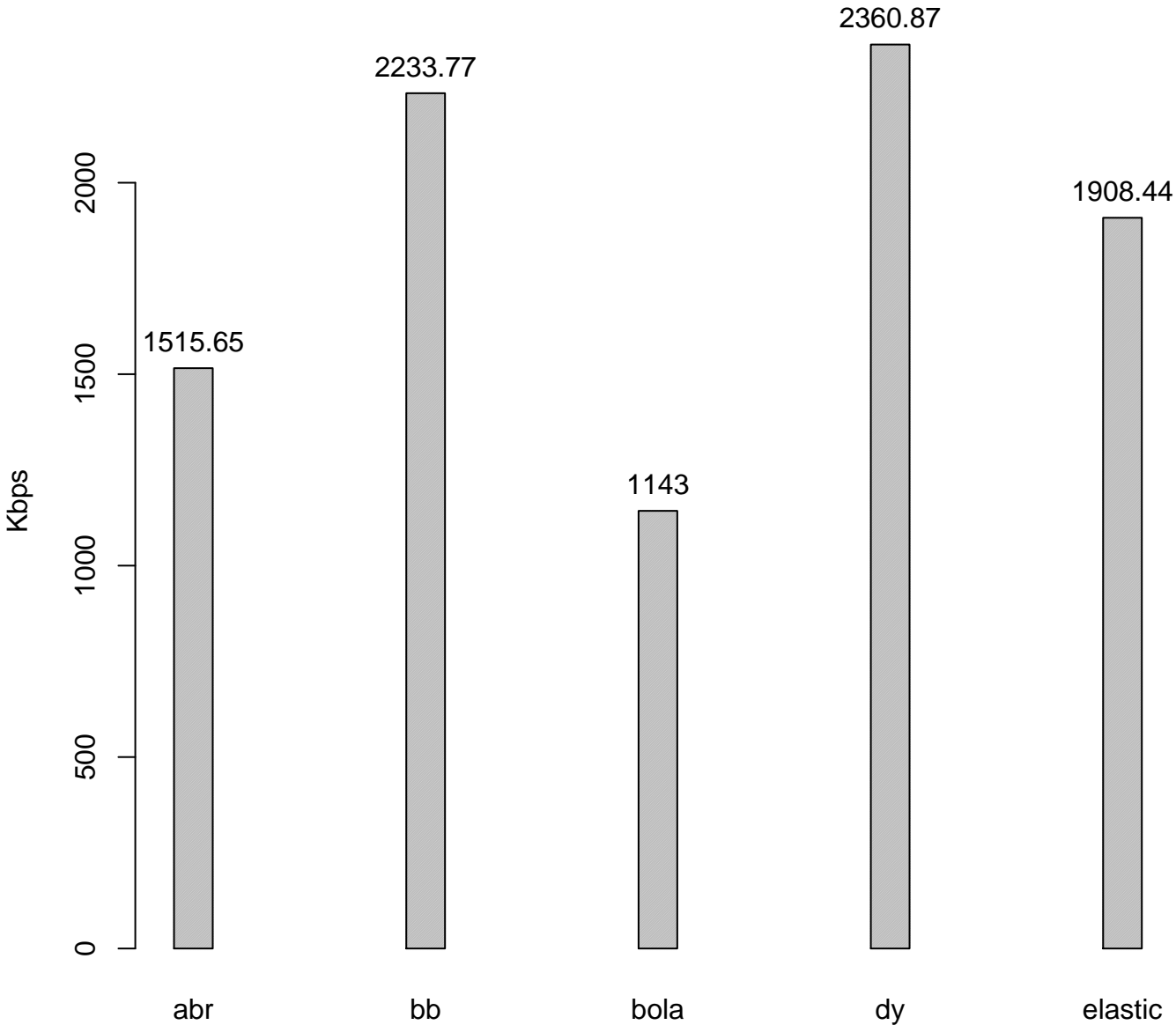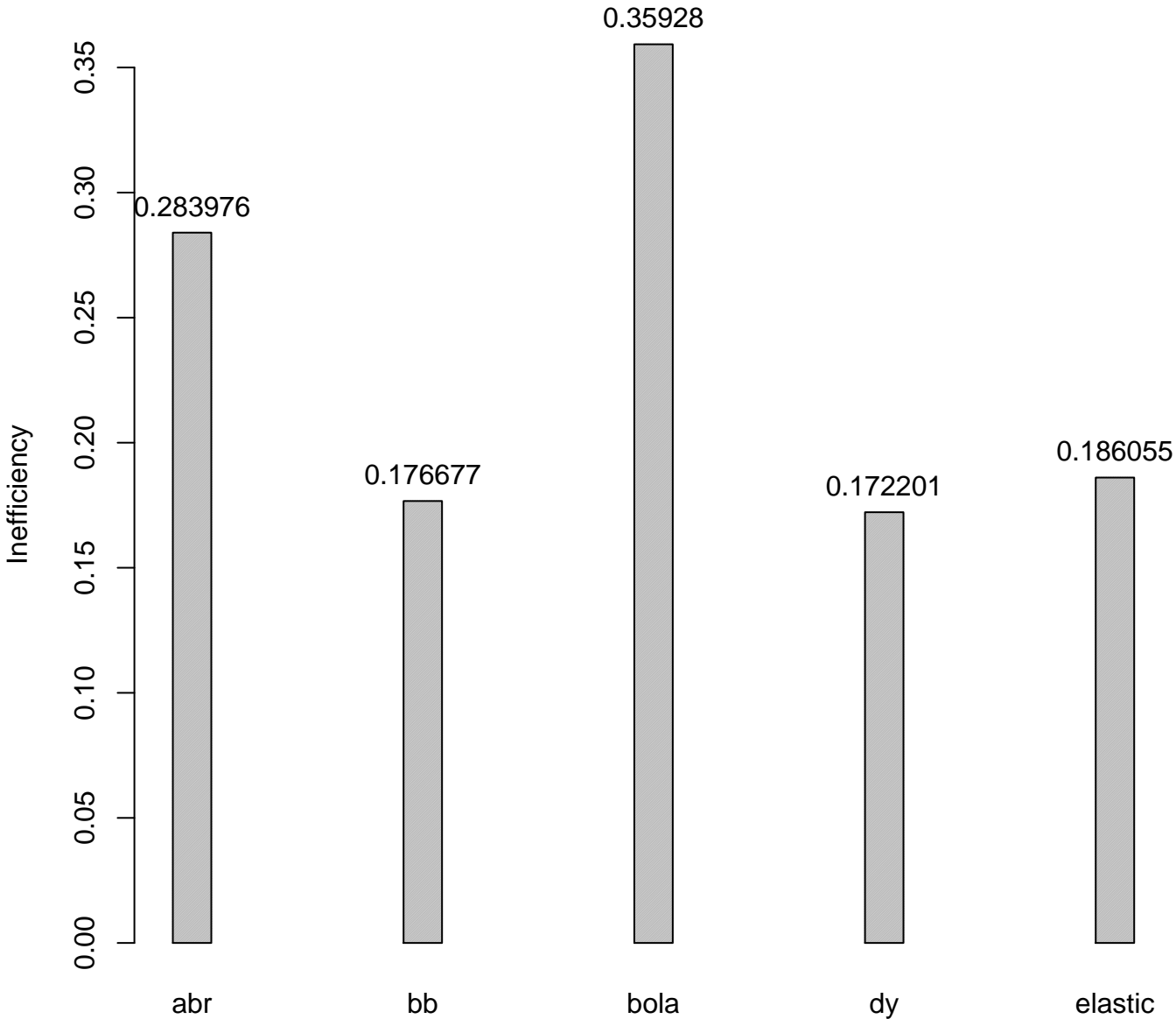**Network profile: p3 Sample: t4 Metric: # quality change**
Buffer: 30−60 min: bola

Network profile: p3 Sample: t5 Metric: Avg−Bitrate
Buffer: 30−60   max: dy

Kbps

1870.99

1798.51

1548.13

1505.92

1427.97

abr   bb   bola   dy   elastic

Network profile: p3 Sample: t5 Metric: Inefficiency
Buffer: 30–60 min: dy

**Network profile: p3 Sample: t5 Metric: # quality change
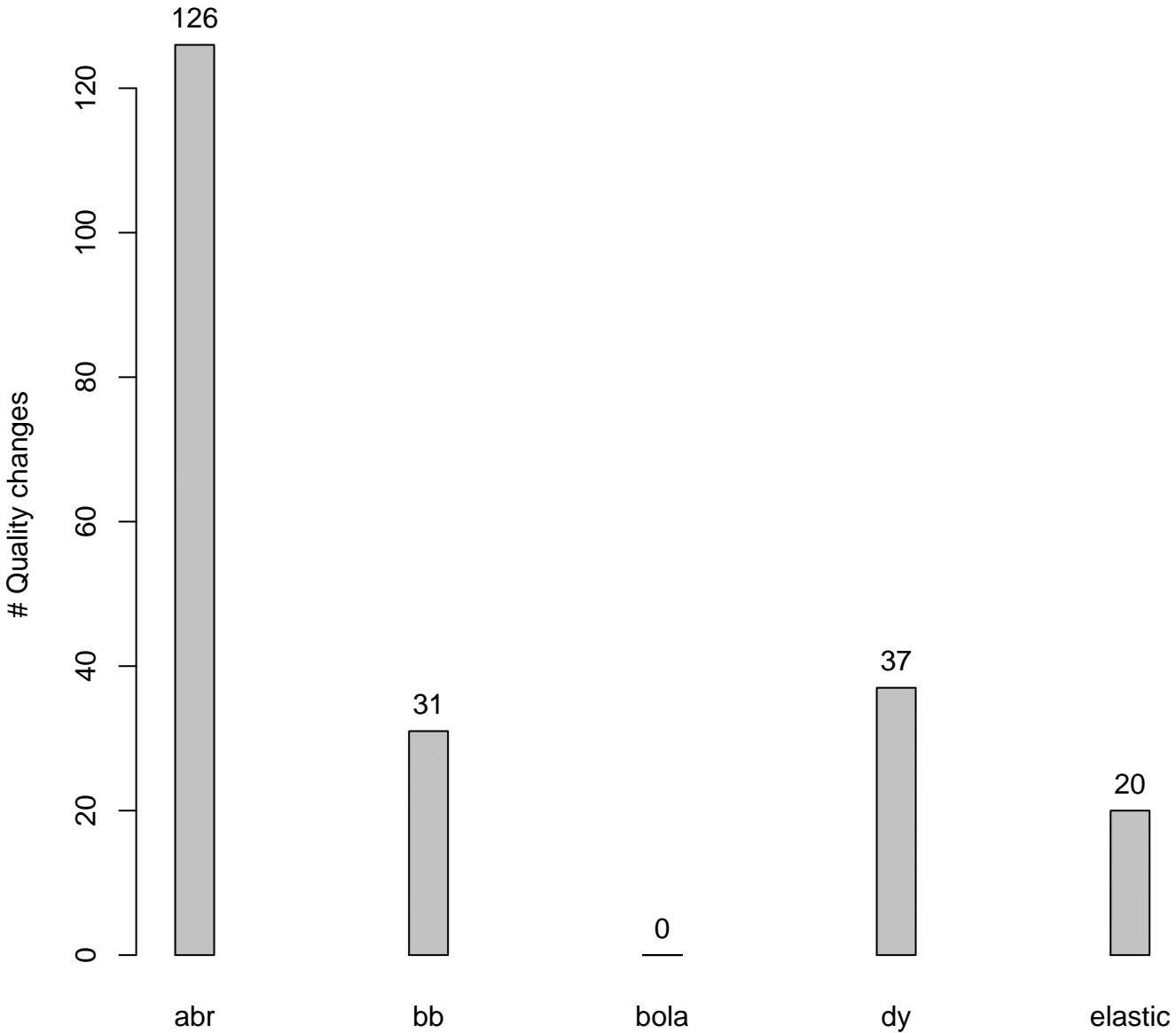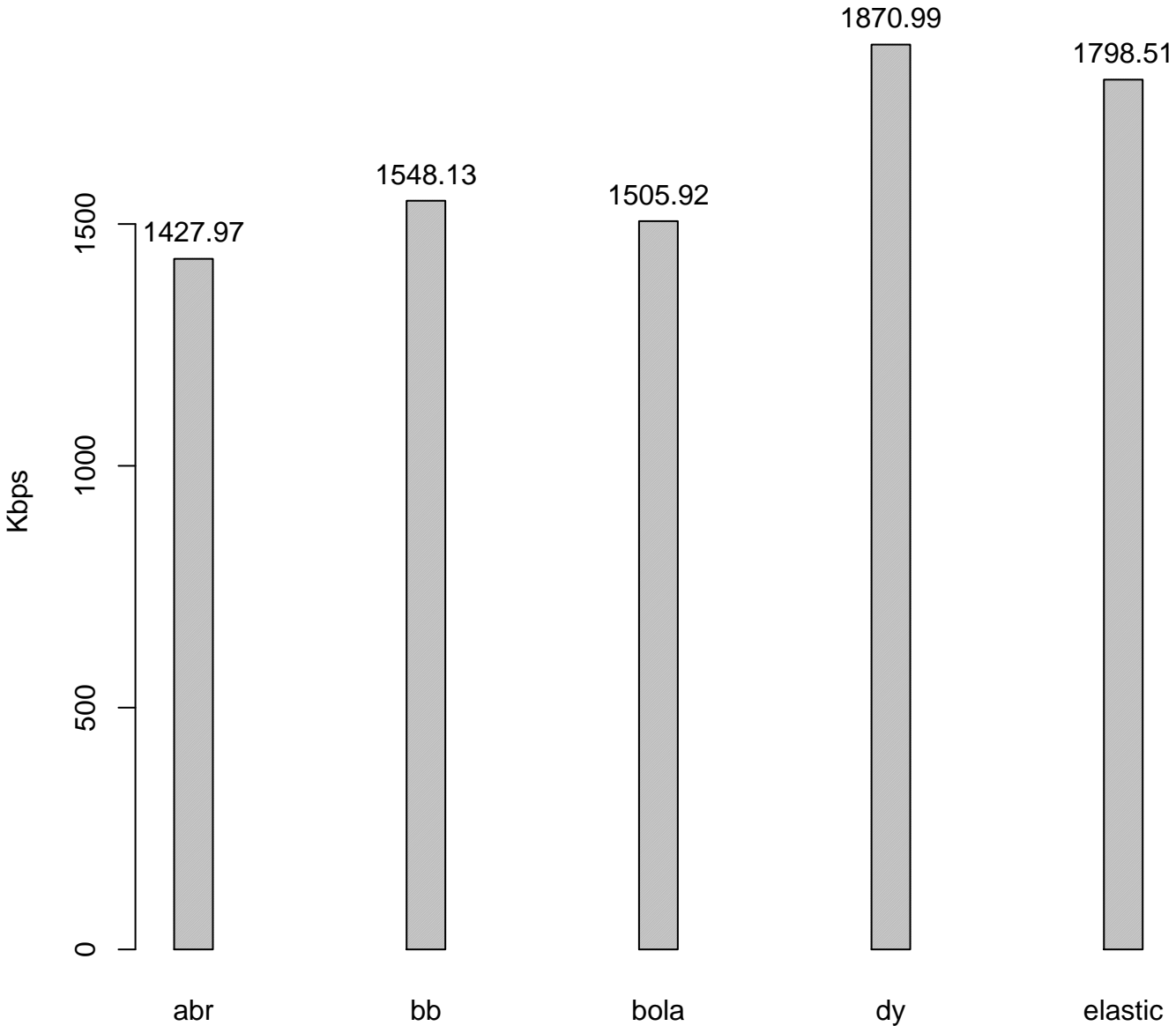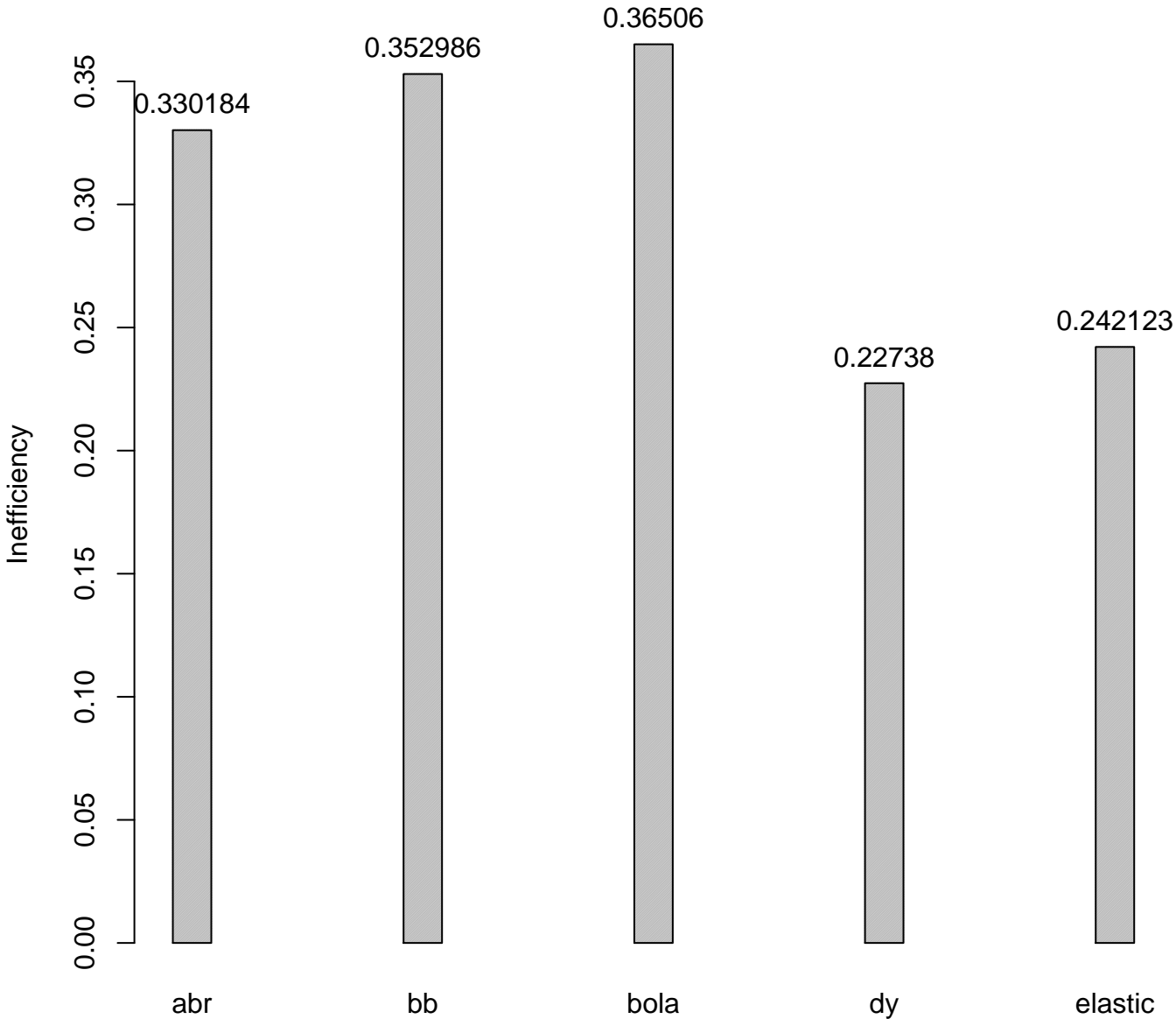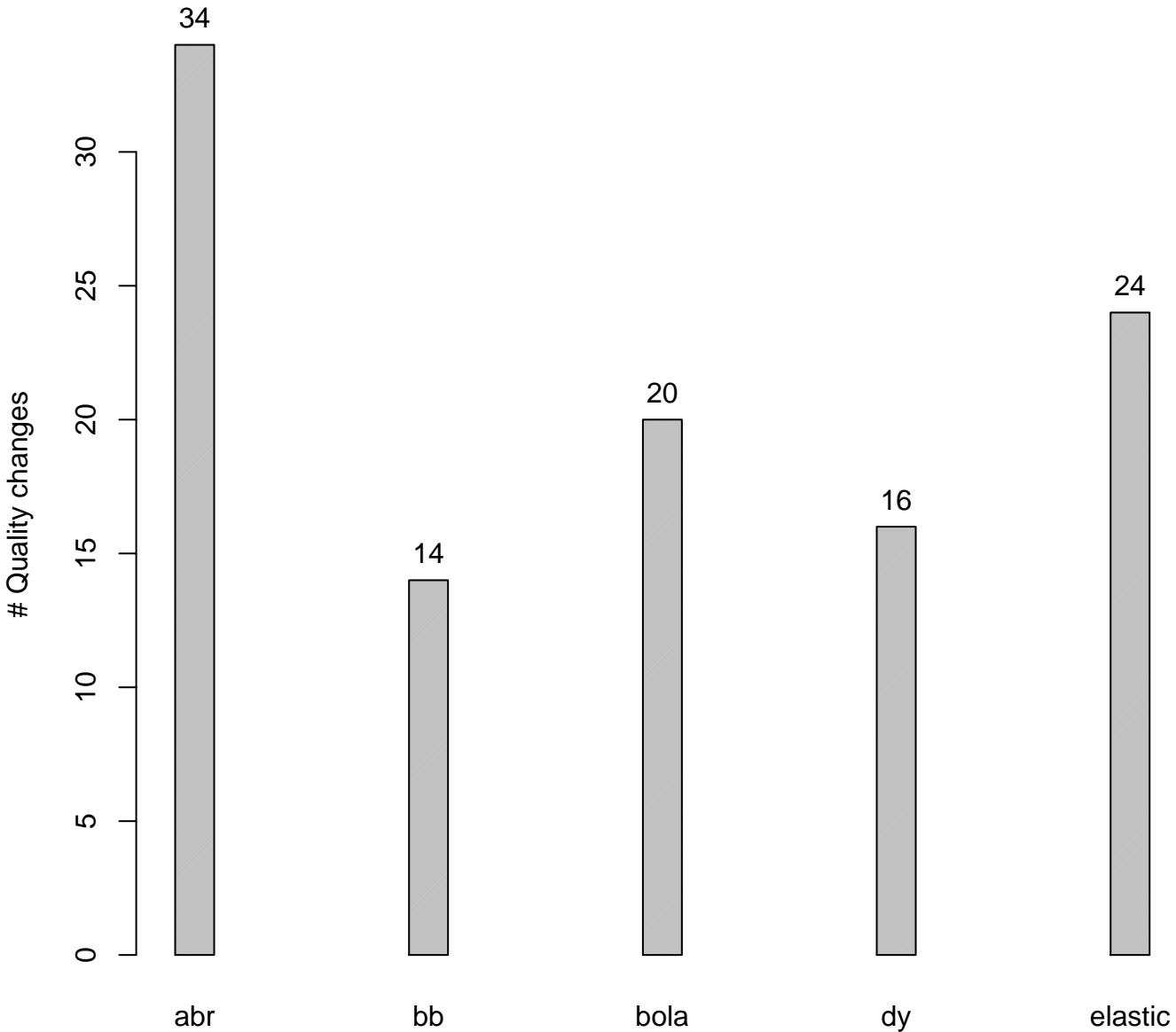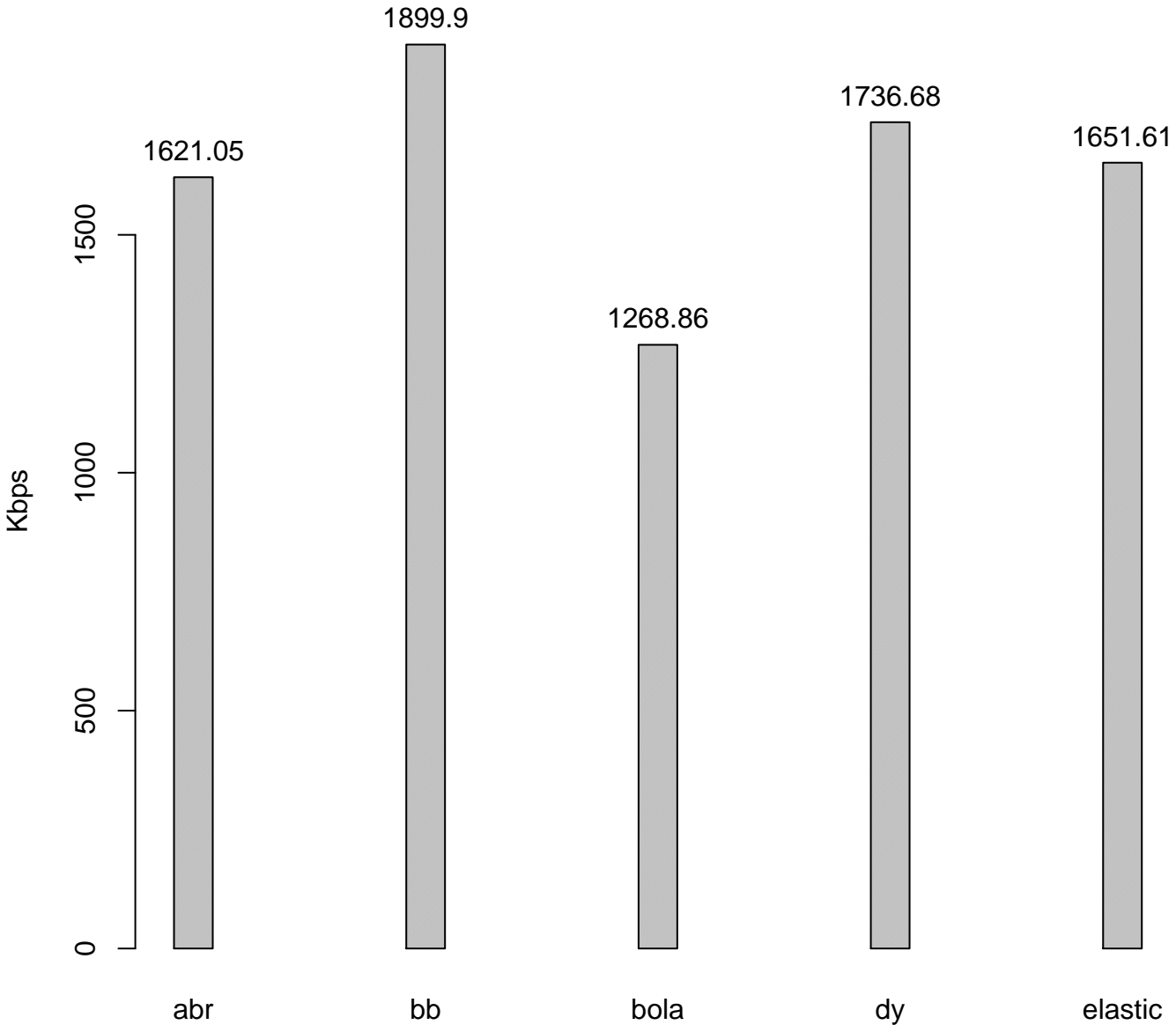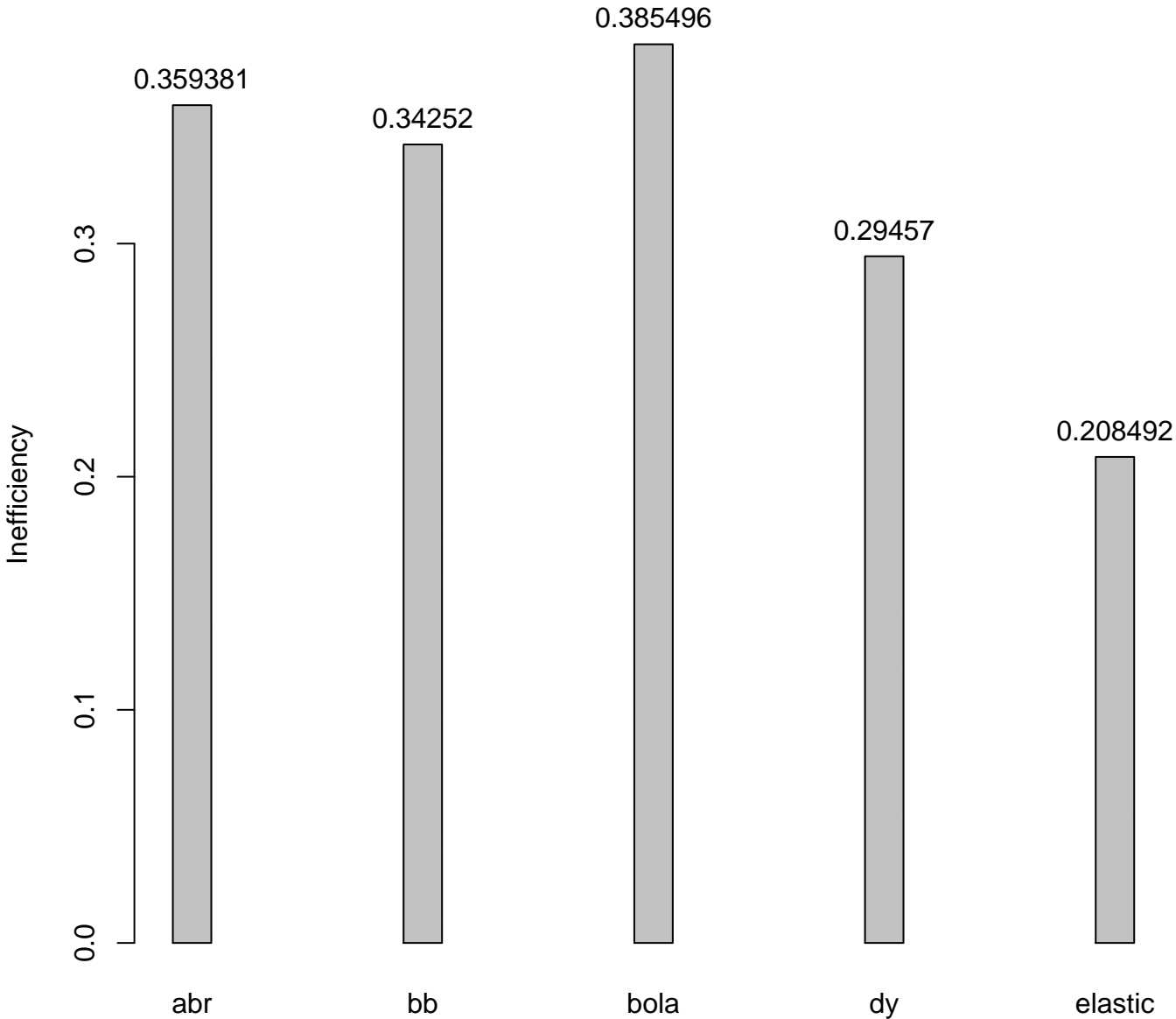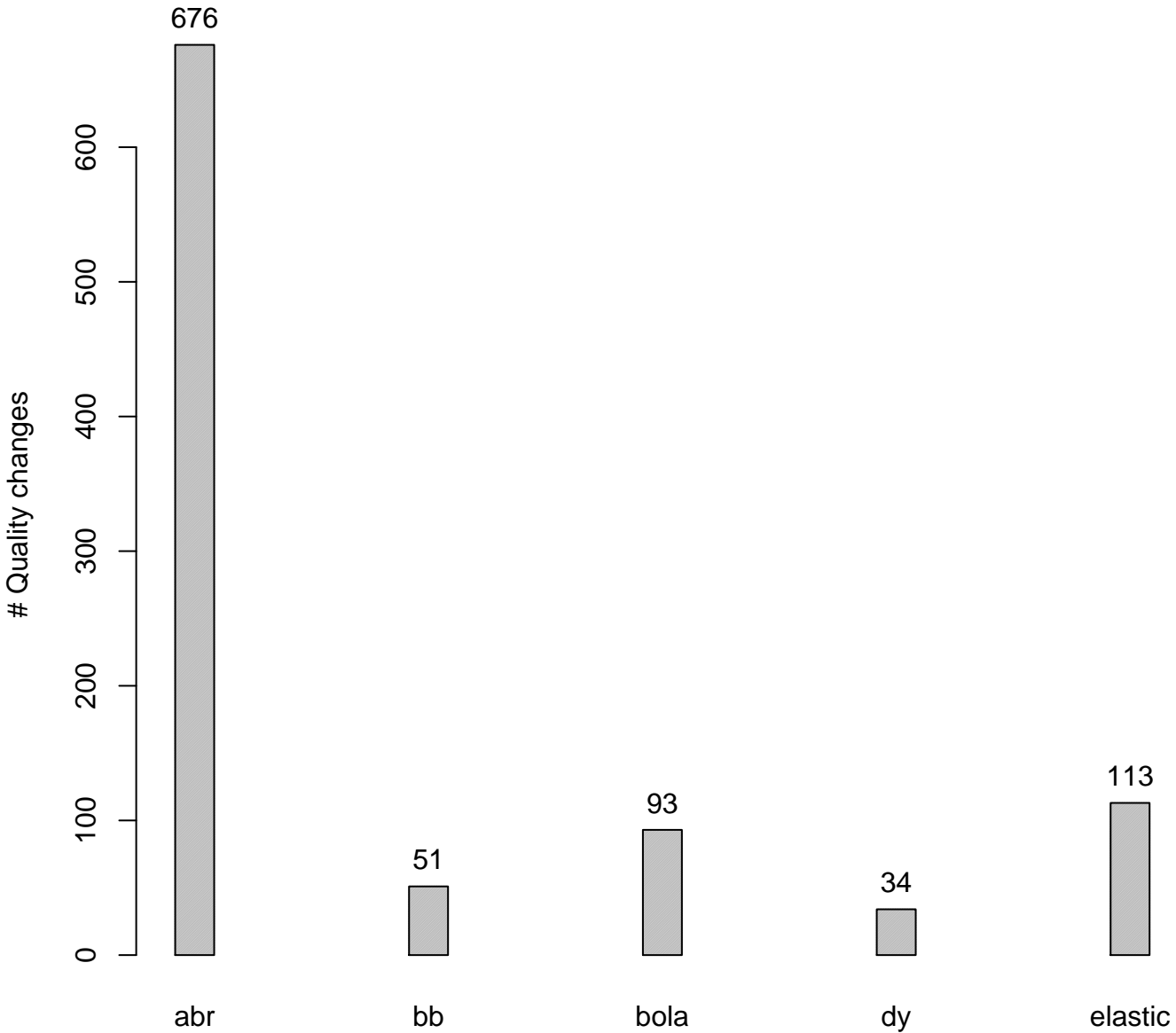Buffer: 30–60 min: bb**

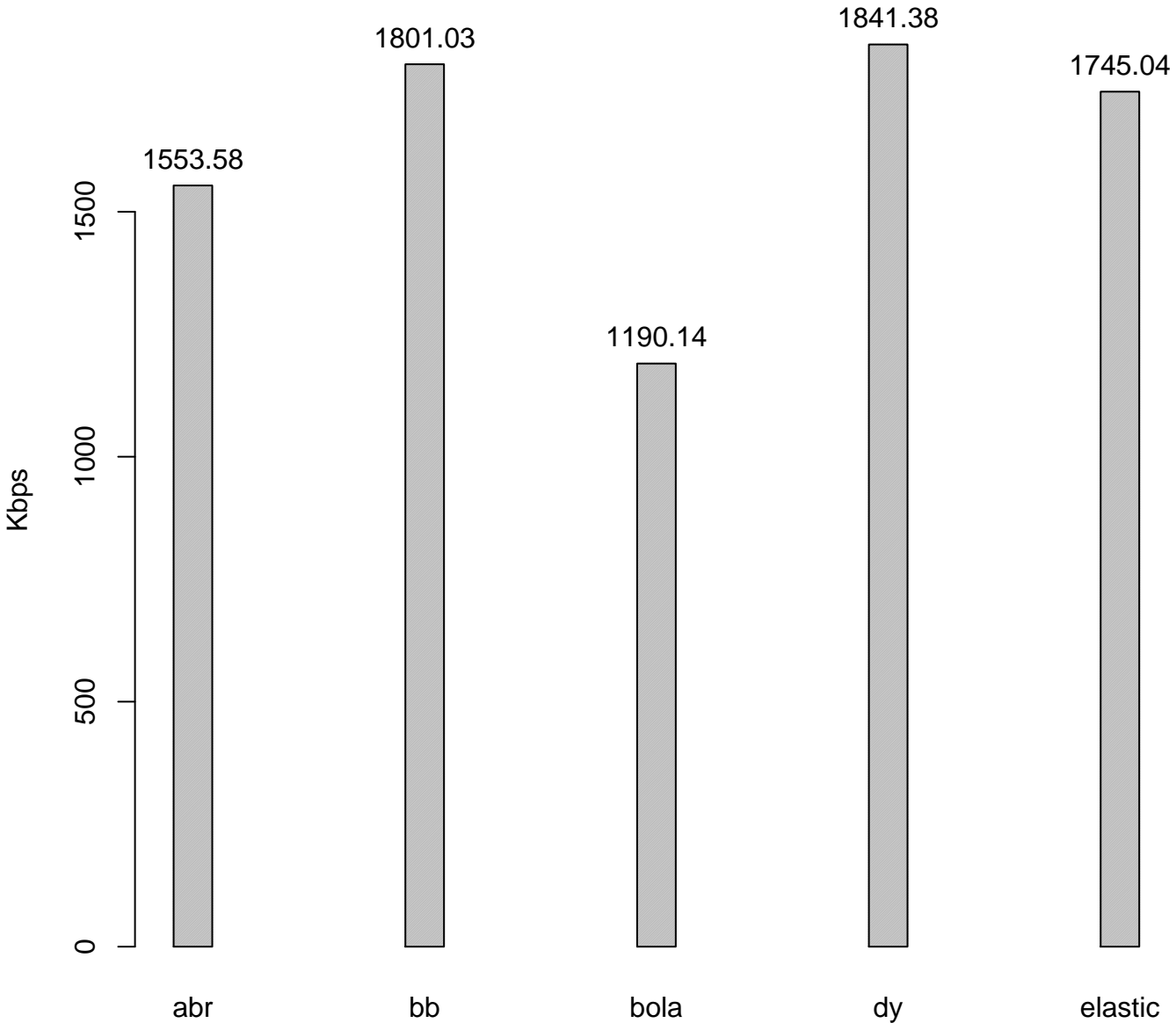**Network profile: p3 Sample: t6 Metric: Avg−Bitrate**
Buffer: 30−60   max: bb

Network profile: p3 Sample: t6 Metric: Inefficiency
Buffer: 30−60 min: elastic

Network profile: p3 Sample: t6 Metric: # quality change
Buffer: 30–60 min: dy

Network profile: p3 Sample: t7 Metric: Avg−Bitrate
Buffer: 30−60 max: dy

Kbps

abr 1553.58
bb 1801.03
bola 1190.14
dy 1841.38
elastic 1745.04

**Network profile: p3 Sample: t7 Metric: Inefficiency
Buffer: 30−60 min: elastic**

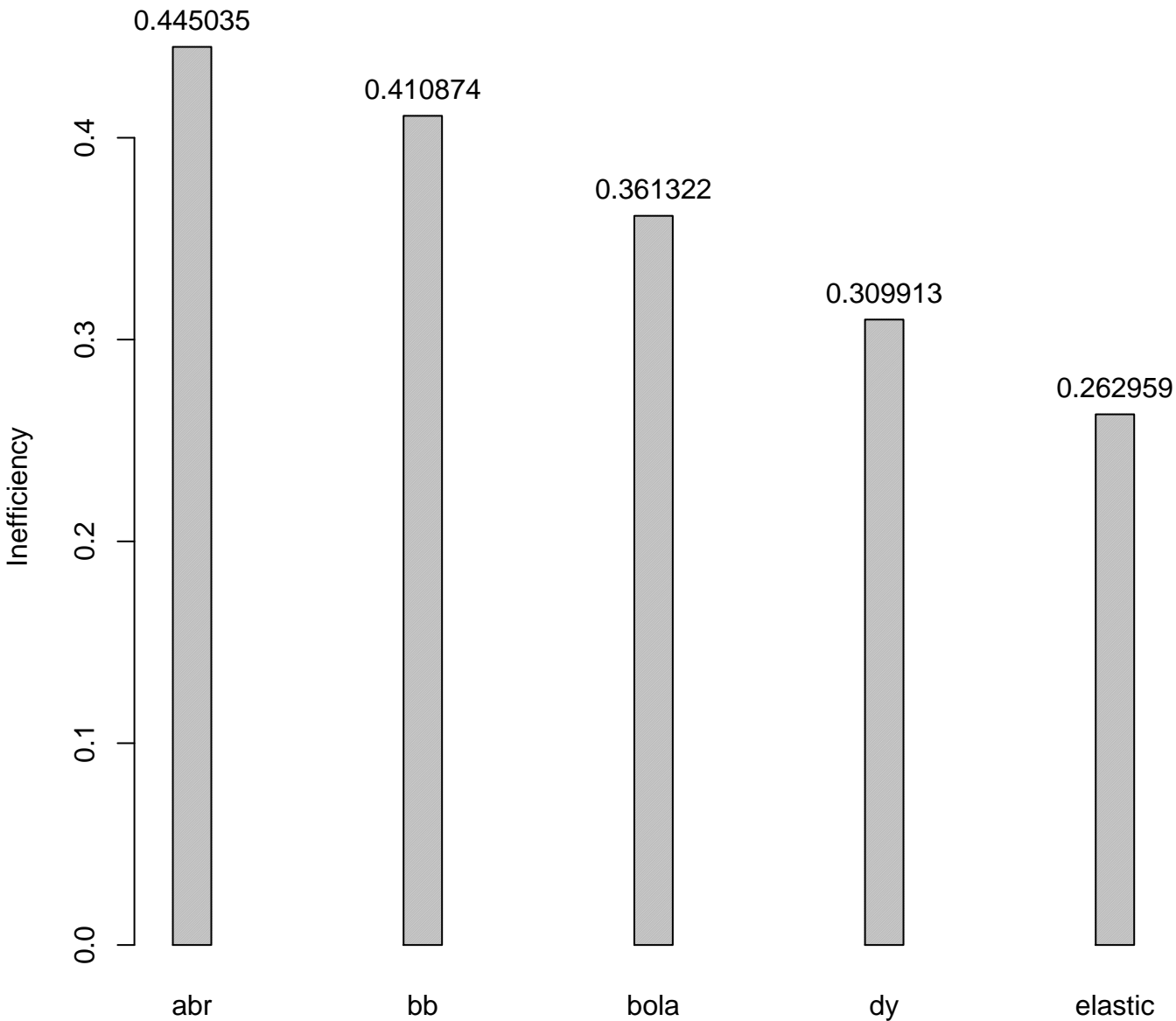**Network profile: p3 Sample: t7 Metric: # quality change**
Buffer: 30–60 min: bola

Network profile: p4 Sample: t1 Metric: Avg−Bitrate
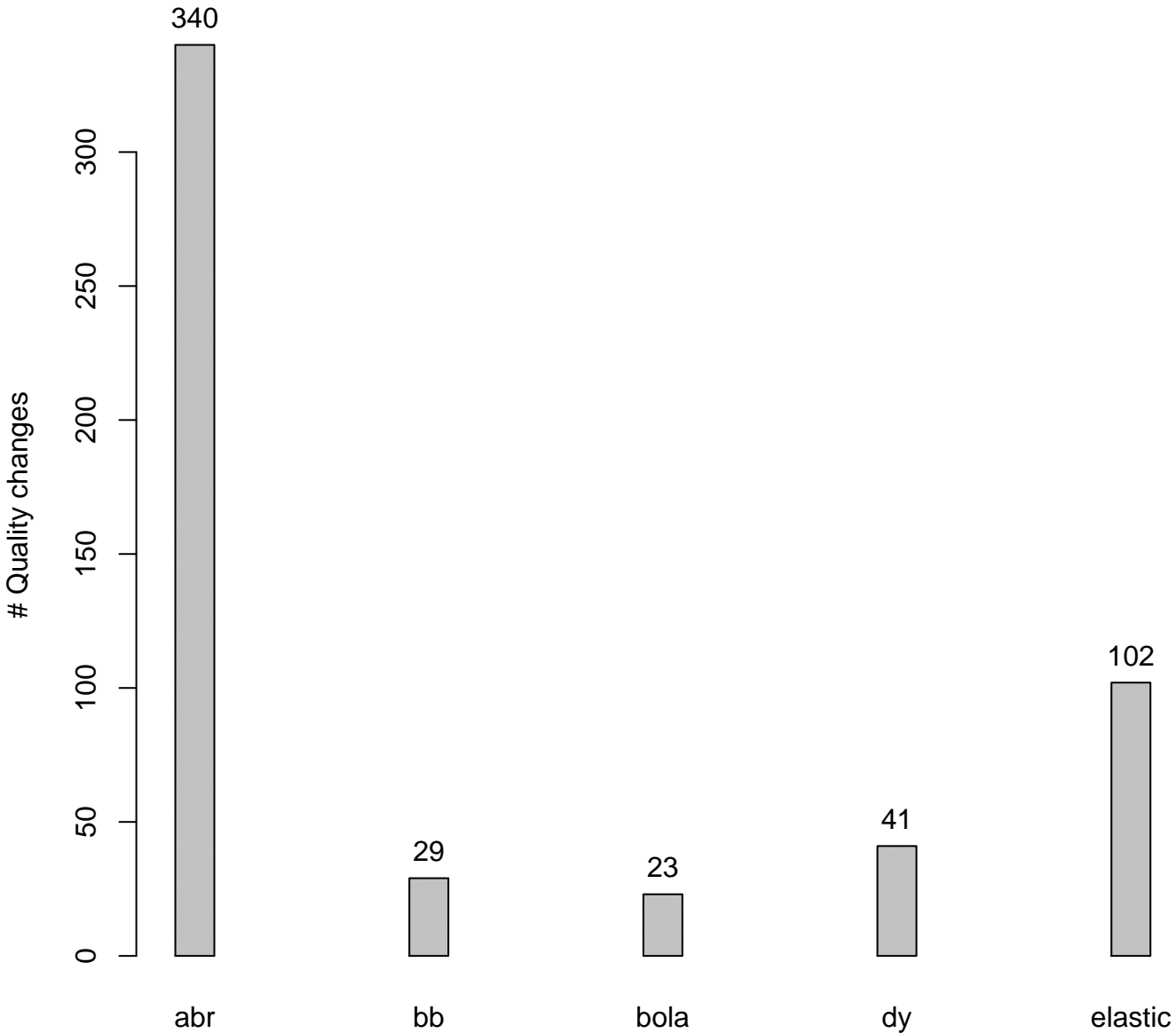**Buffer: 30−60   max: dy**

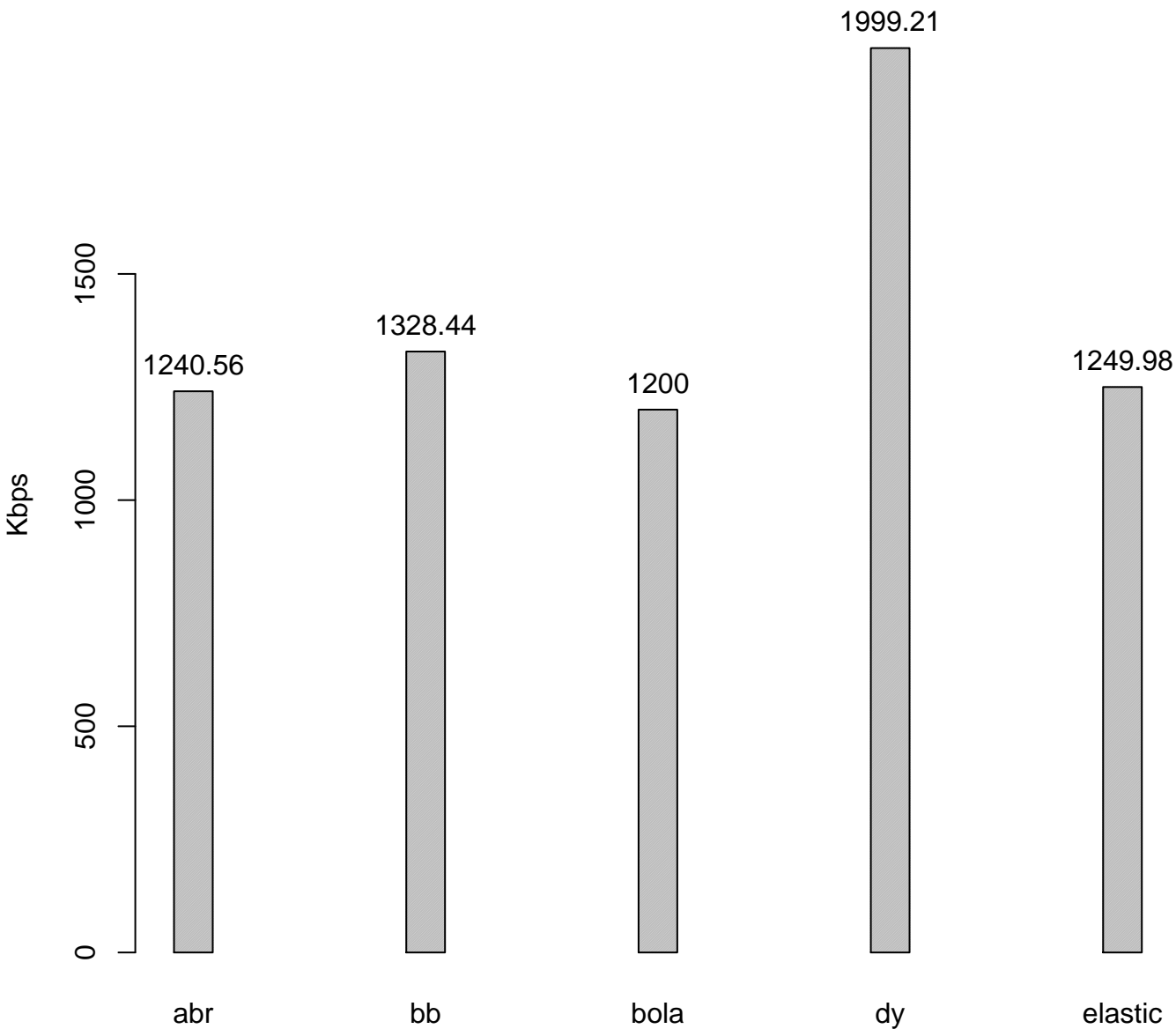**Network profile: p4 Sample: t1 Metric: Inefficiency**
Buffer: 30−60 min: elastic

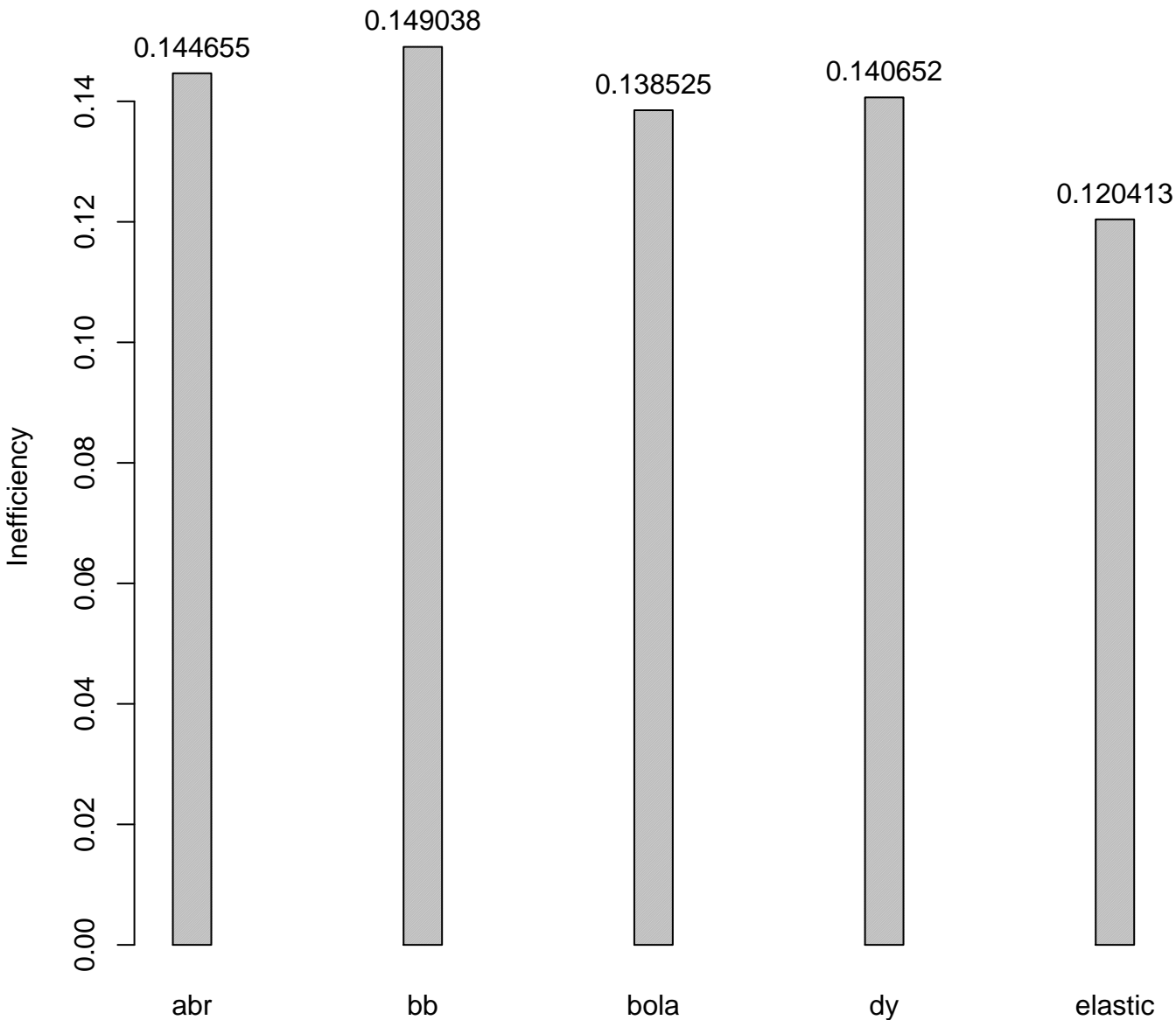**Network profile: p4 Sample: t1 Metric: # quality change Buffer: 30−60 min: bola**

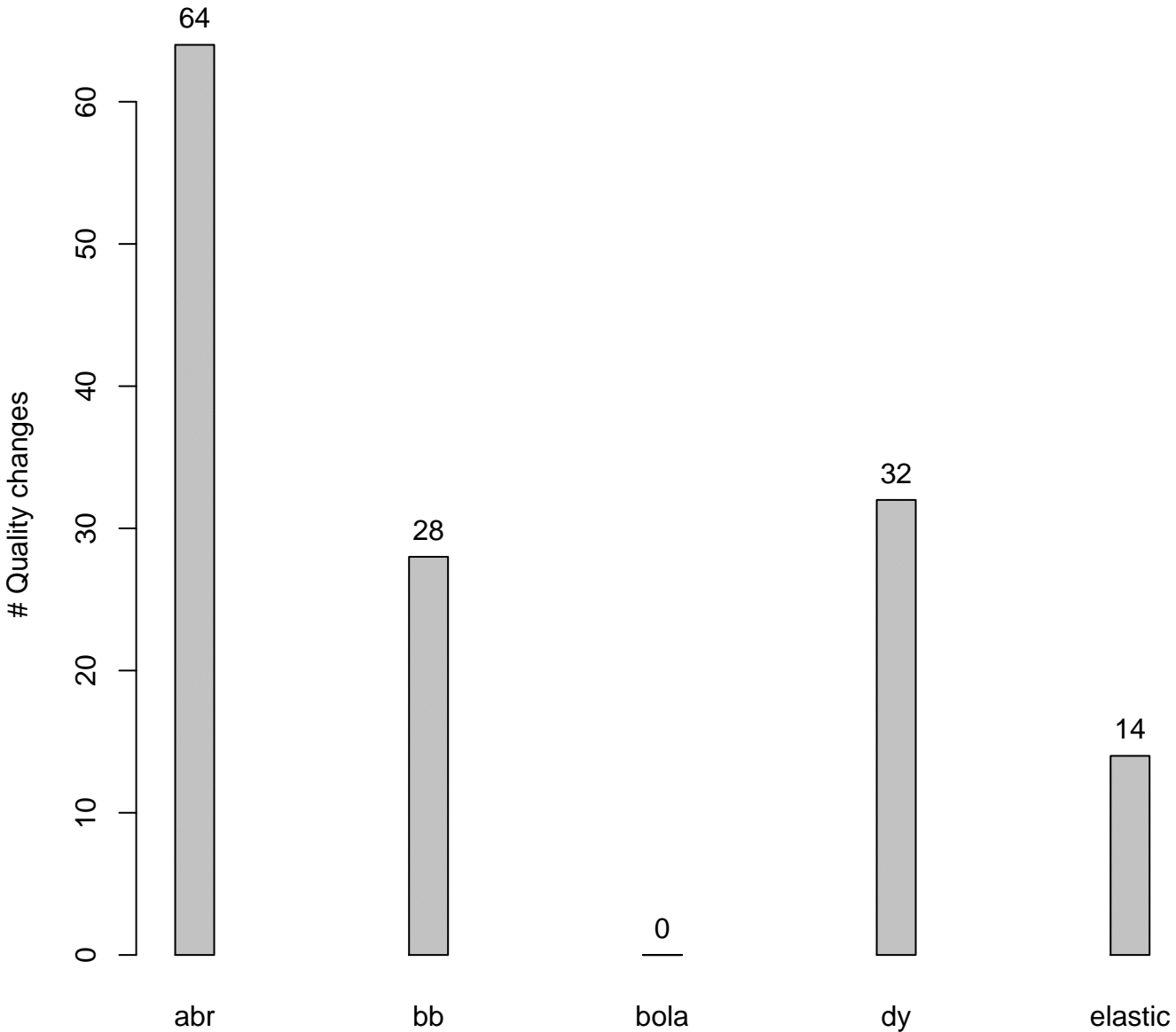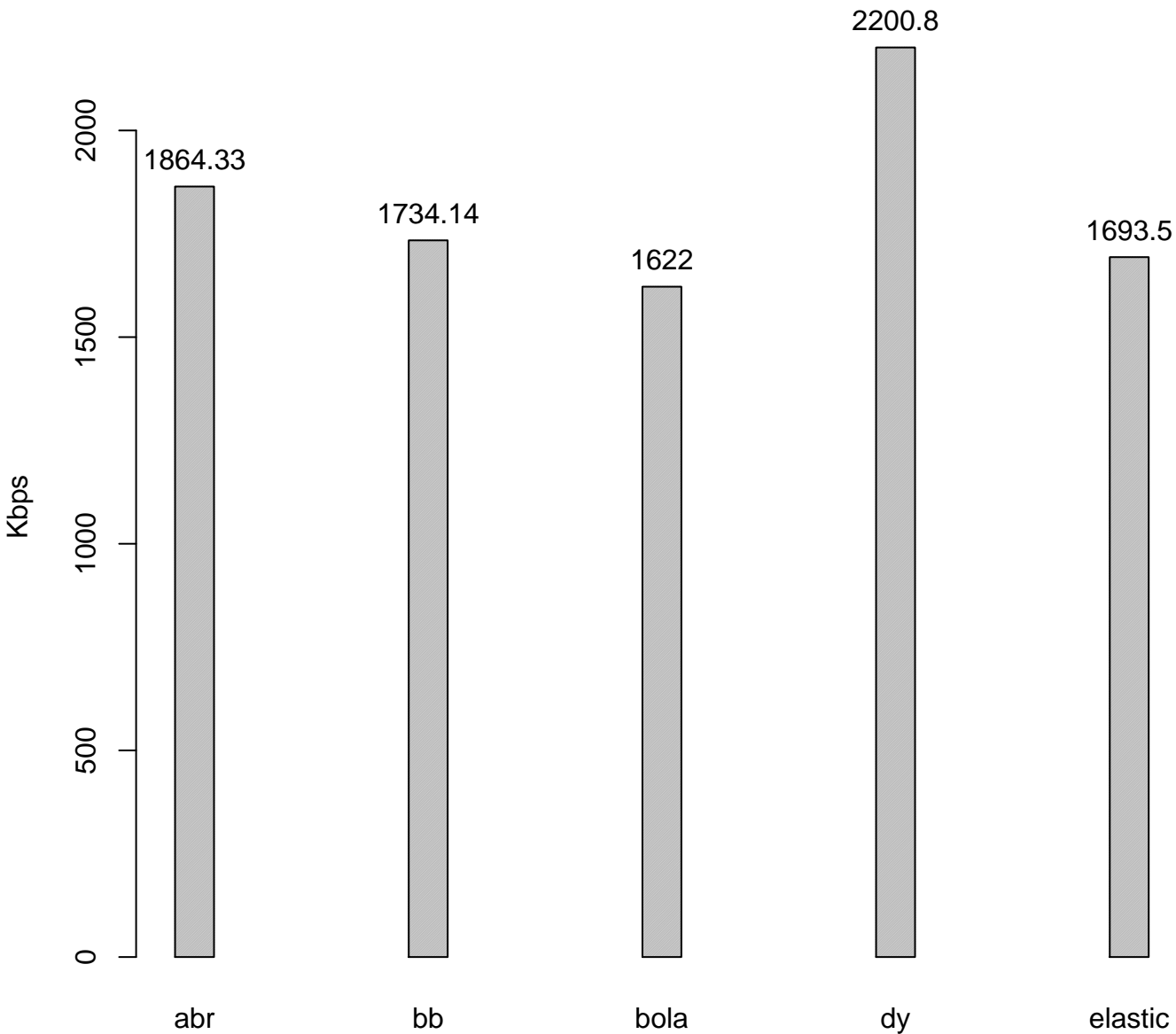**Network profile: p4 Sample: t2 Metric: Avg−Bitrate**
Buffer: 30−60 max: dy

Network profile: p4 Sample: t2 Metric: Inefficiency
Buffer: 30−60 min: elastic

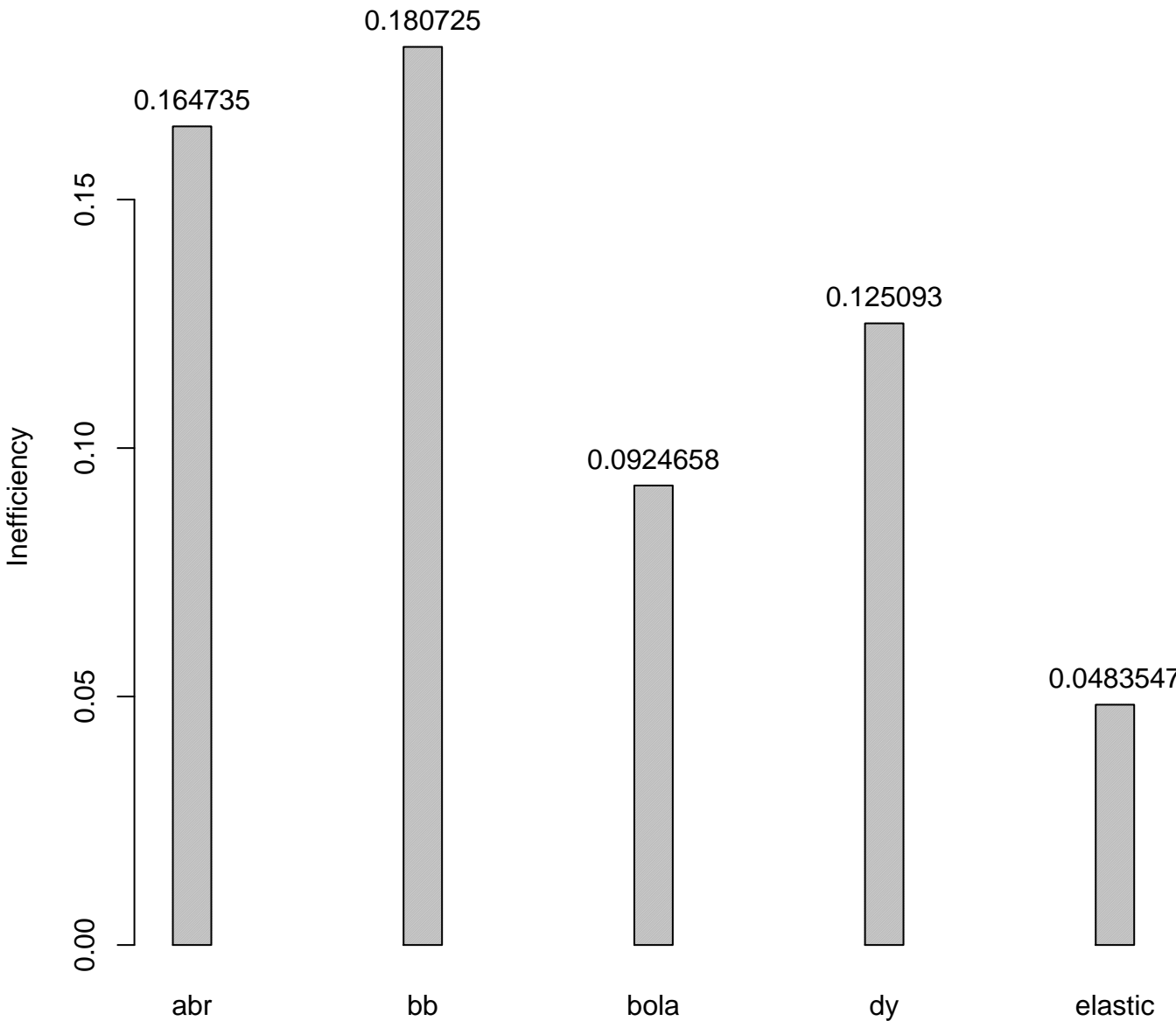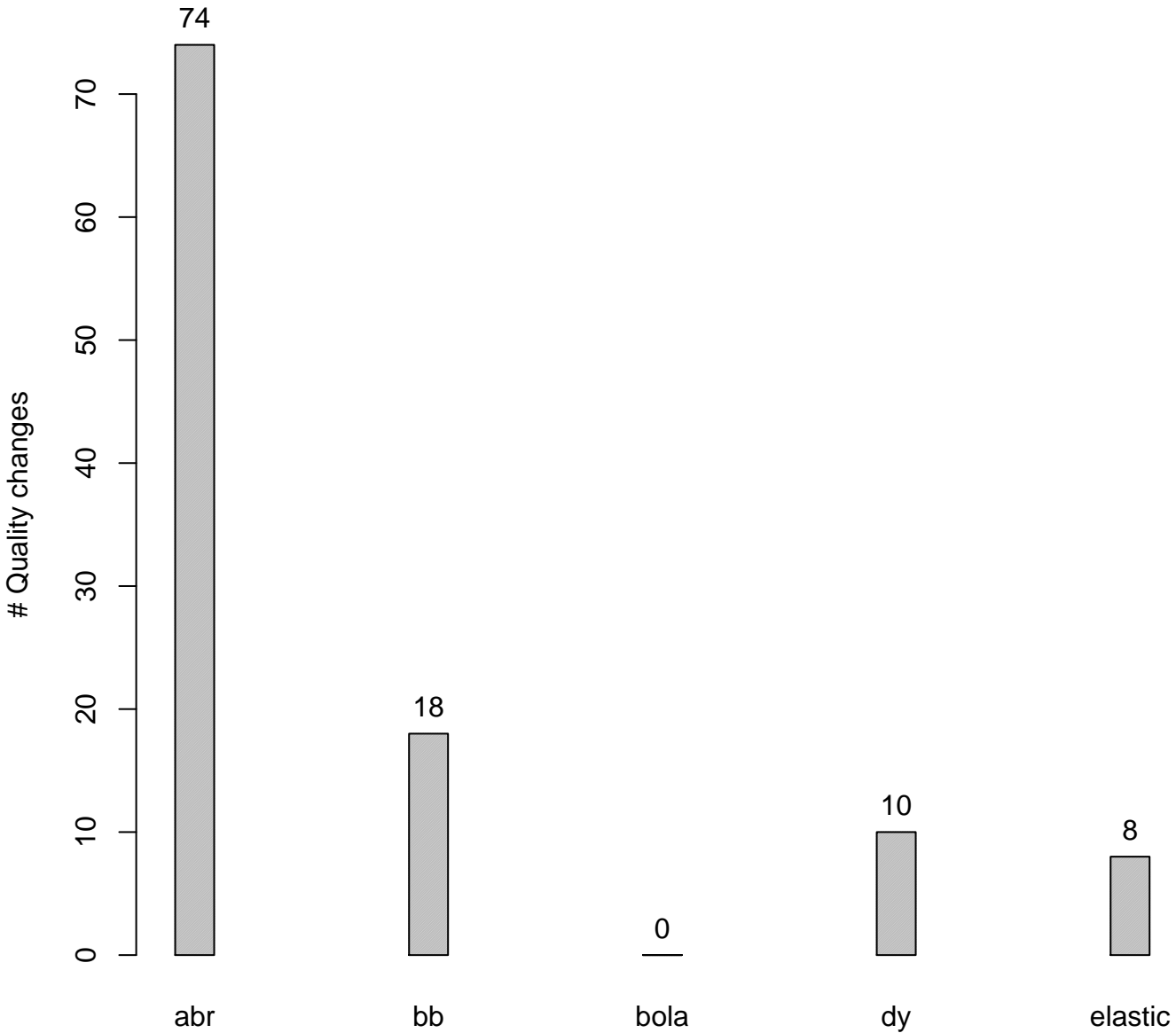**Network profile: p4 Sample: t2 Metric: # quality change**
Buffer: 30−60 min: bola

Quality changes

74

18

0

10

8

abr   bb   bola   dy   elastic

Network profile: p4 Sample: t3 Metric: Avg−Bitrate
Buffer: 30−60   max: dy

Network profile: p4 Sample: t3 Metric: Inefficiency
Buffer: 30−60 min: elastic

Inefficiency

0.181517

0.141252

0.125227

0.0935233

0.0682816

abr   bb   bola   dy   elastic

Network profile: p4 Sample: t3 Metric: # quality change Buffer: 30−60 min: bola

Quality changes

Network profile: p4 Sample: t4 Metric: Avg−Bitrate Buffer: 30−60   max: dy

Network profile: p4 Sample: t4 Metric: Inefficiency
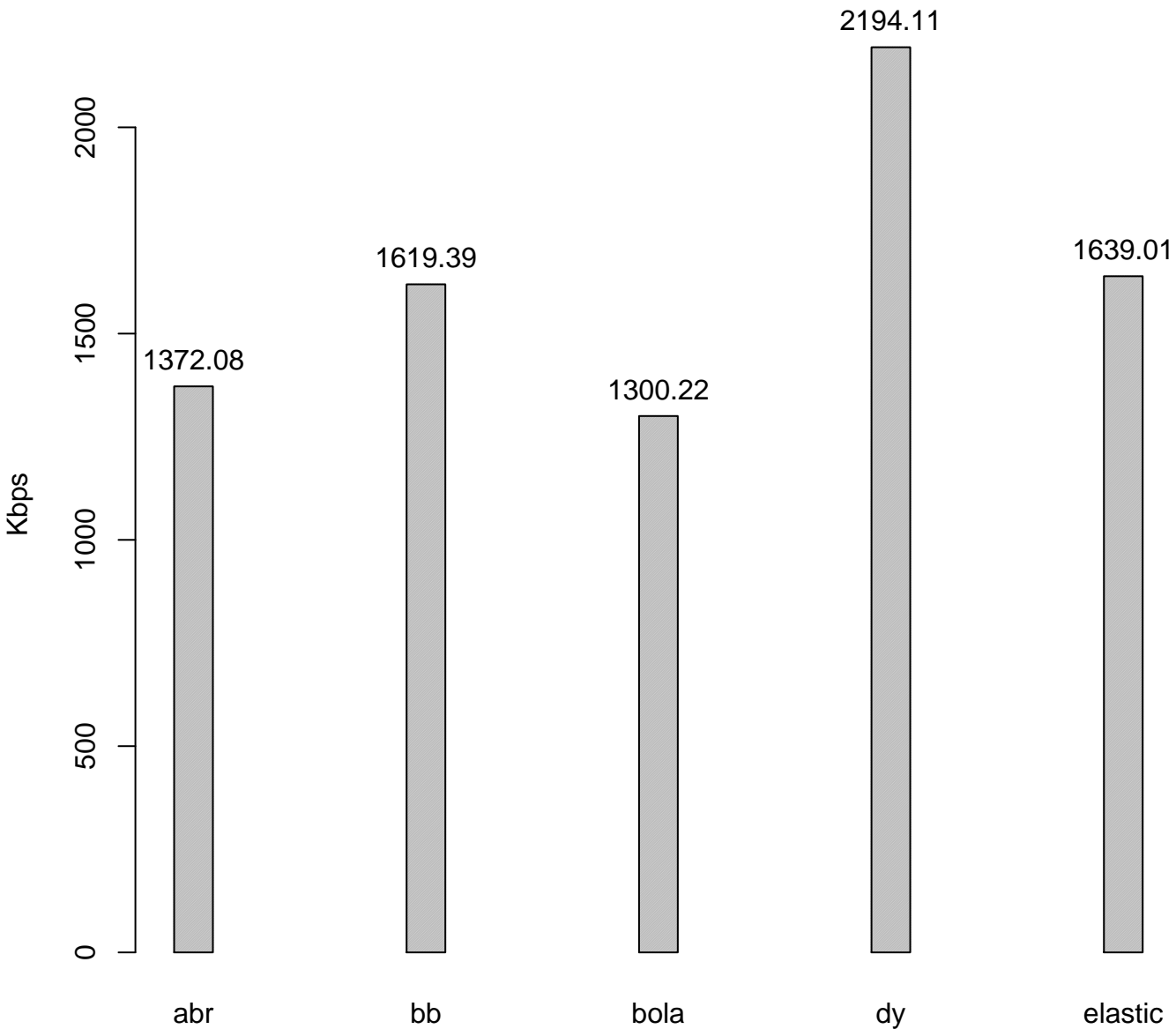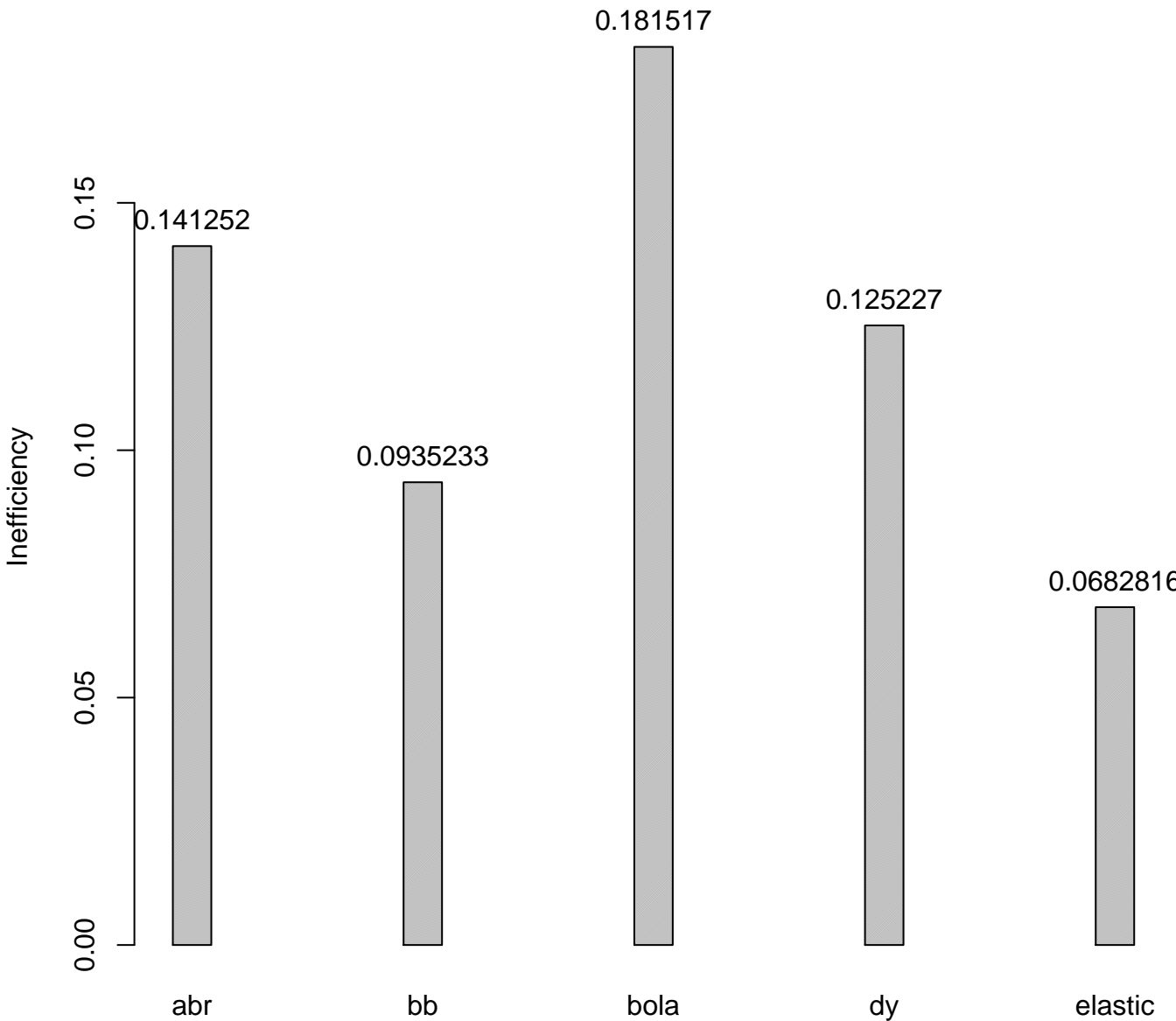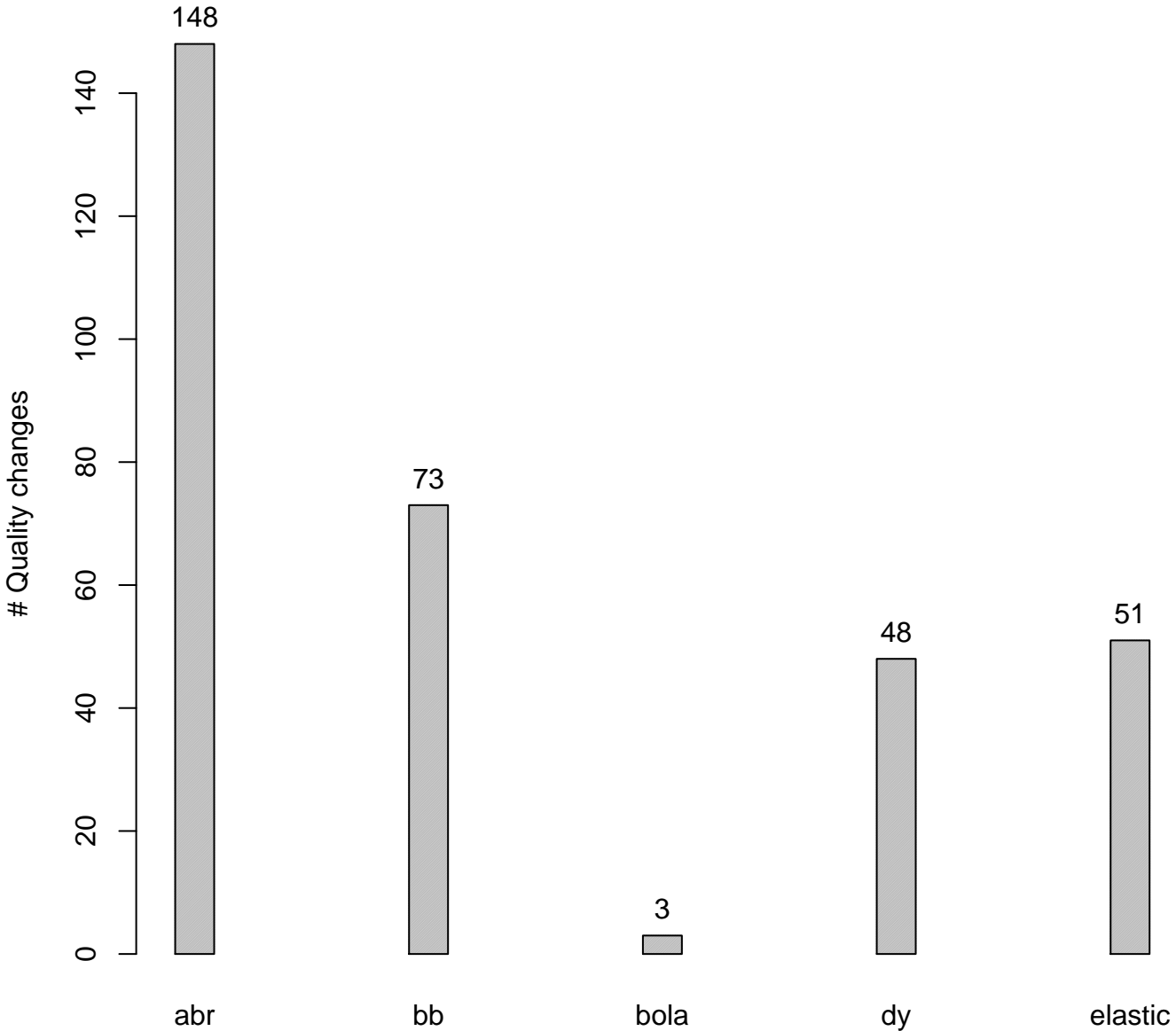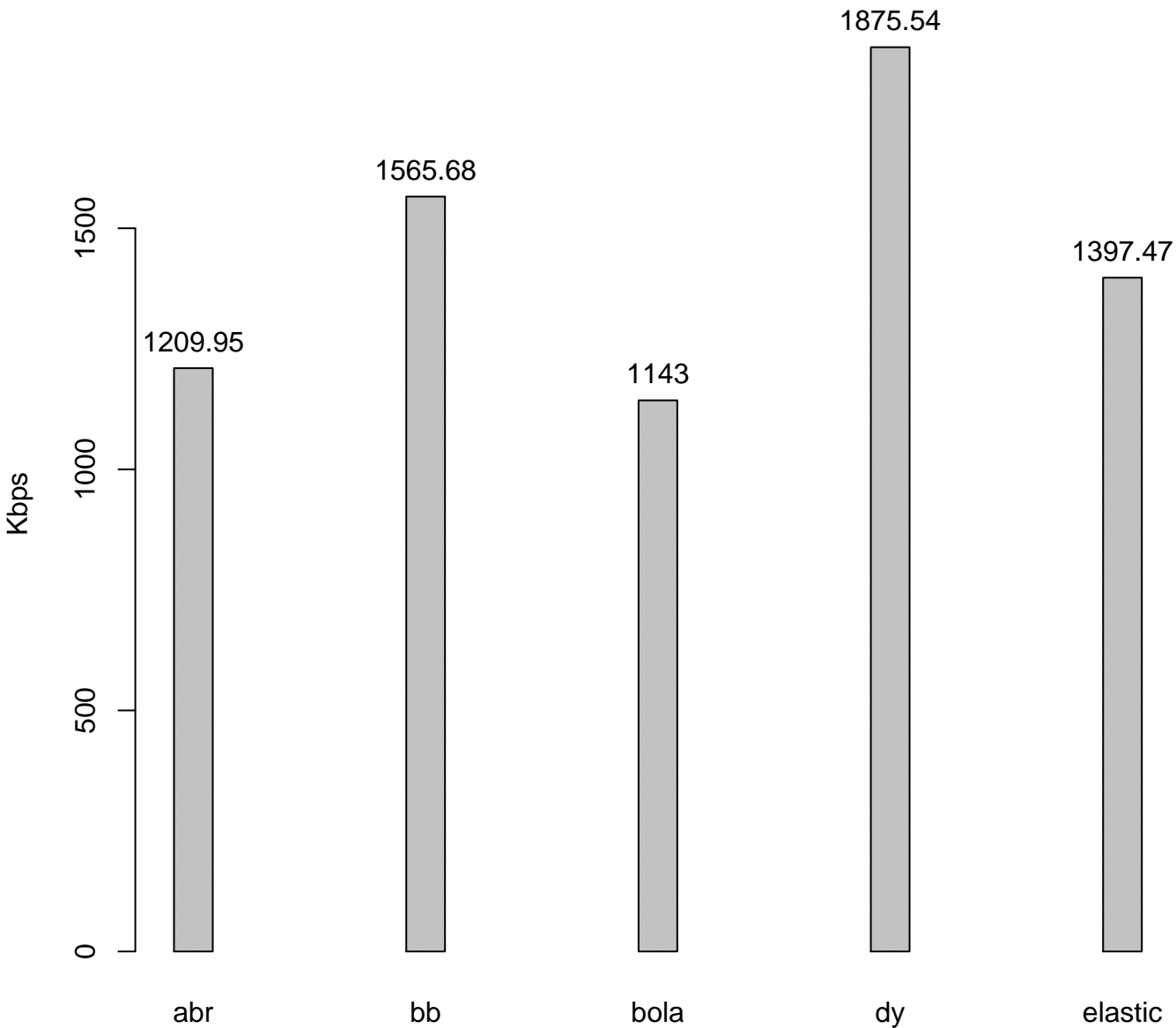**Buffer: 30−60 min: elastic**

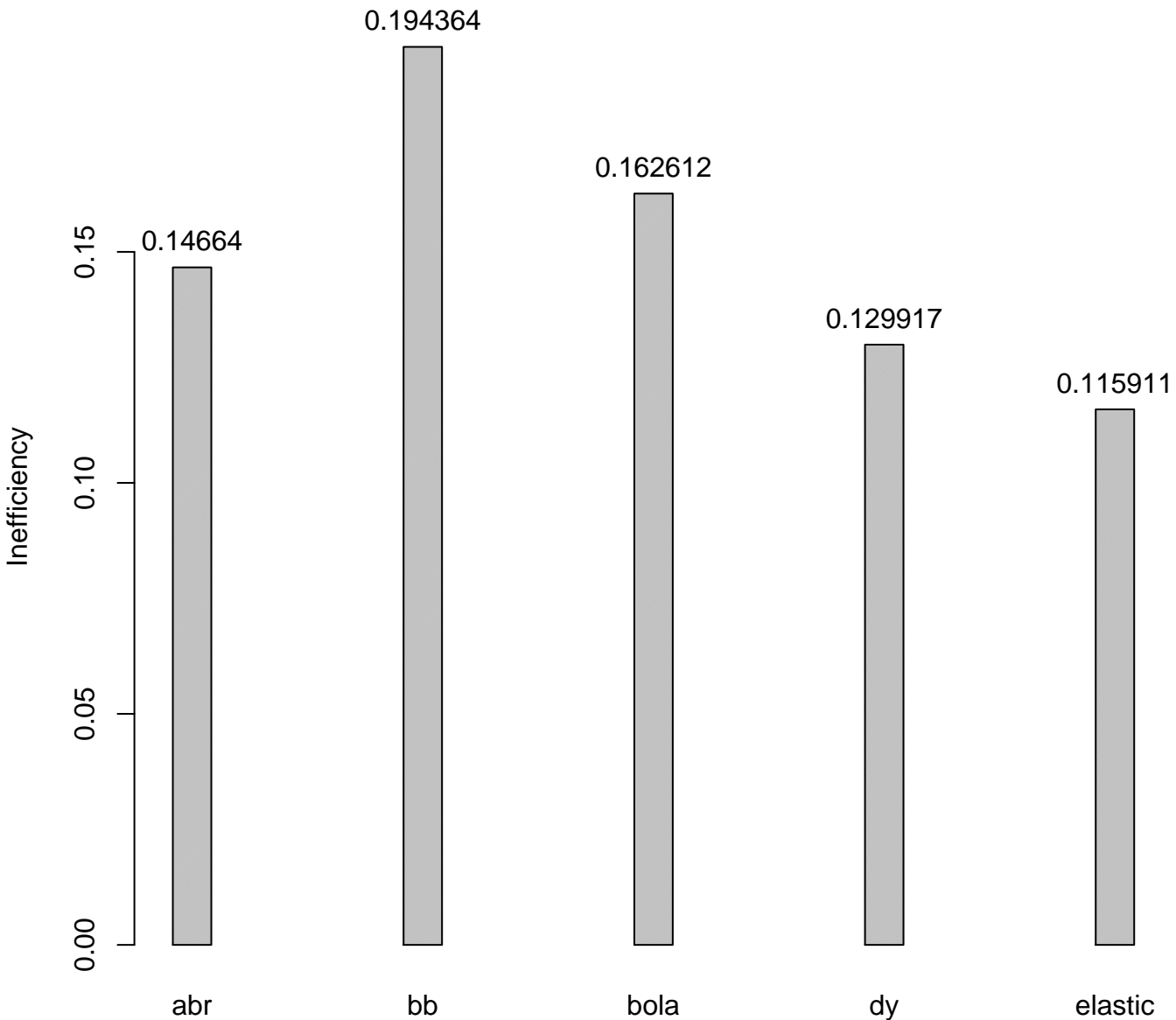**Network profile: p4 Sample: t4 Metric: # quality change**
Buffer: 30–60 min: bola

Network profile: p4 Sample: t5 Metric: Avg−Bitrate
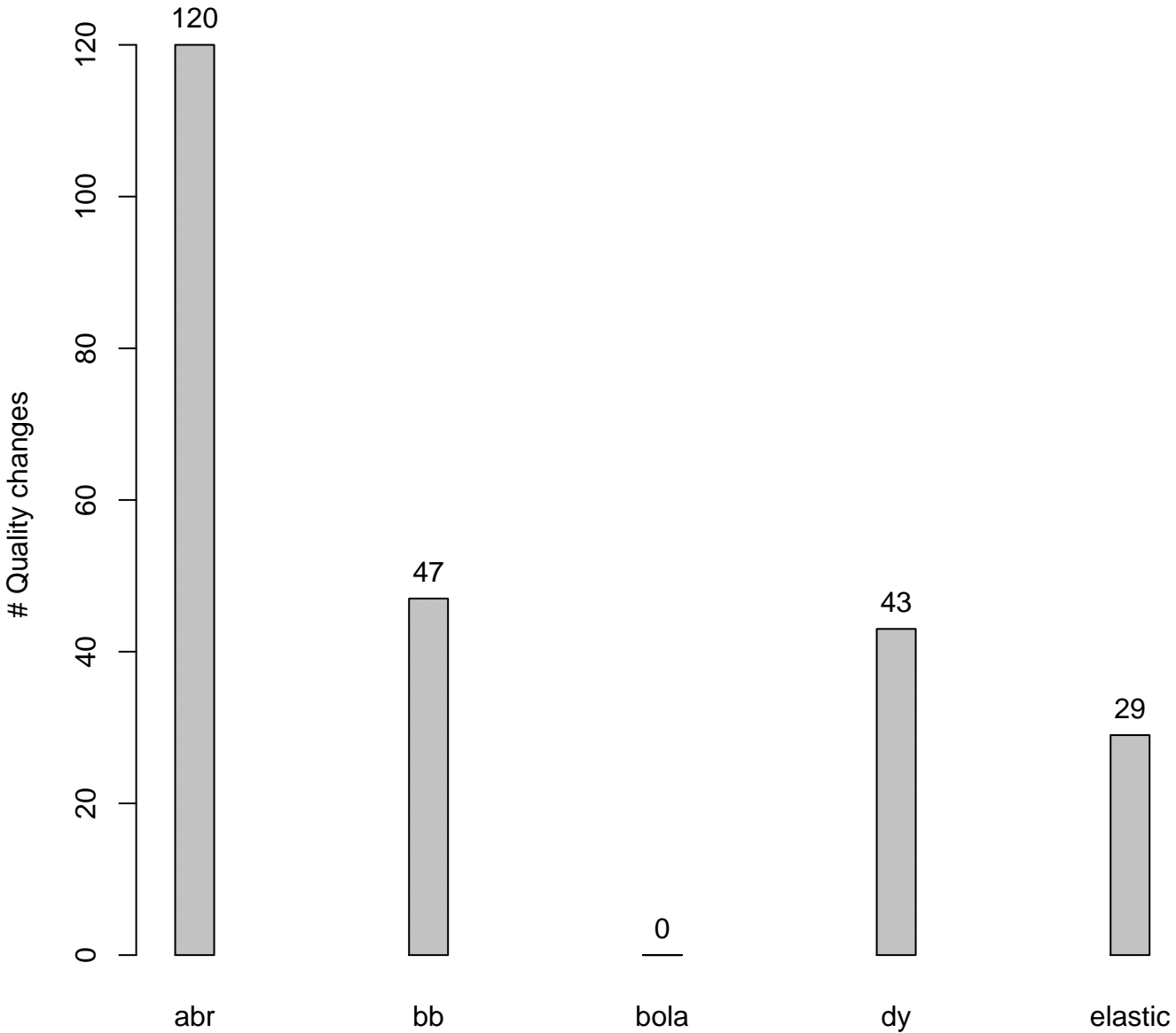**Buffer: 30−60   max: dy**

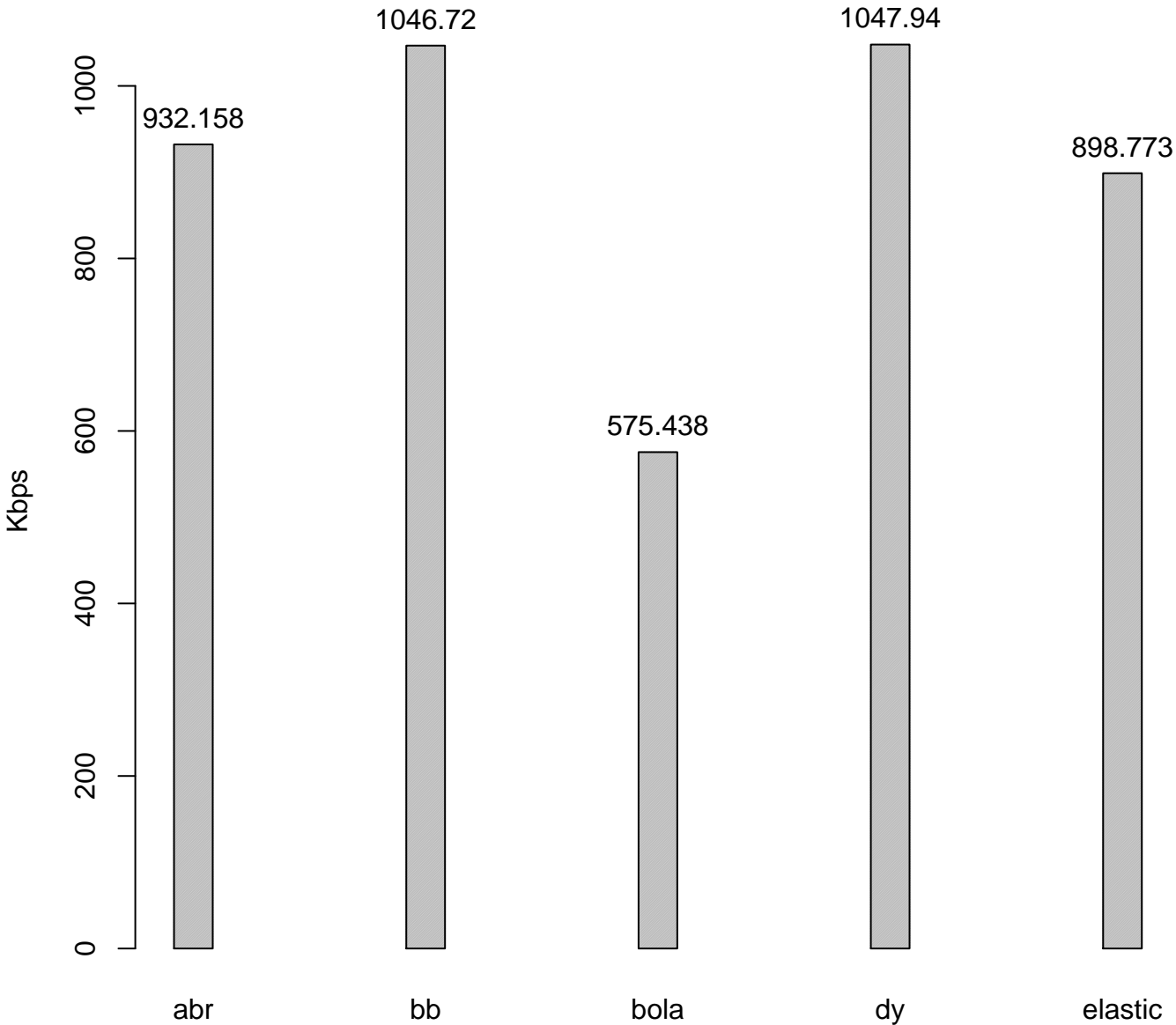**Network profile: p4 Sample: t5 Metric: Inefficiency**
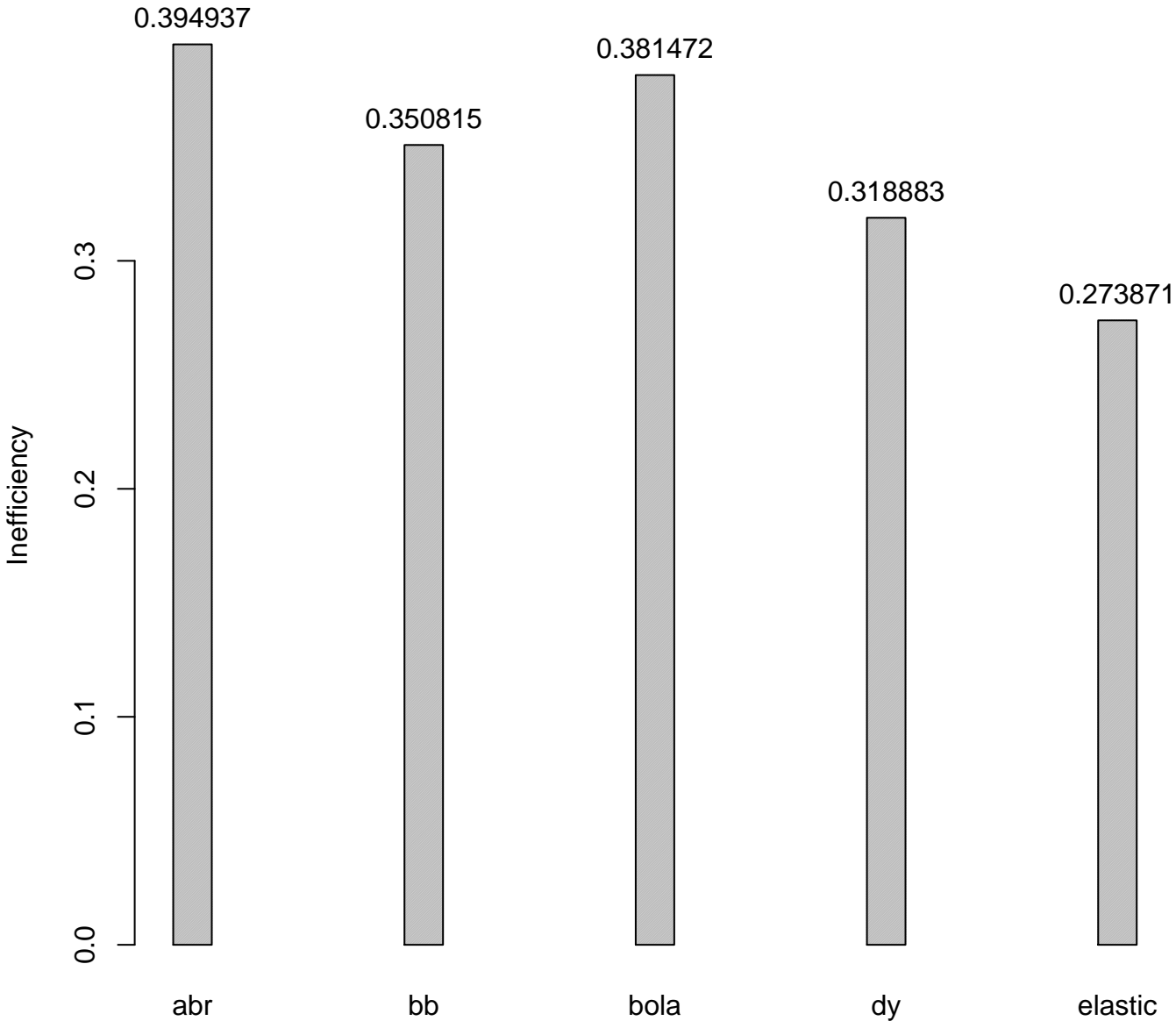**Buffer: 30−60 min: elastic**

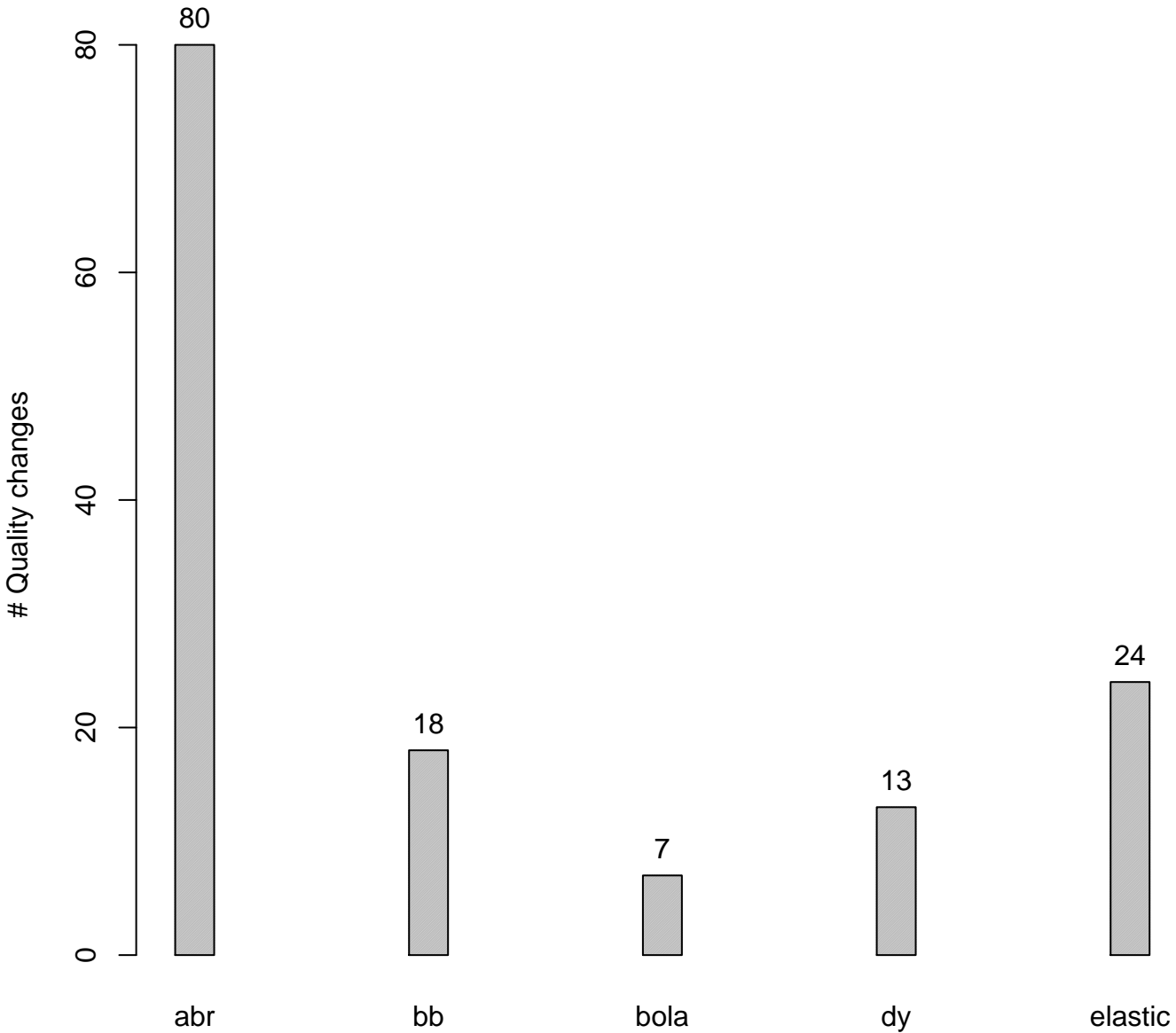**Network profile: p4 Sample: t5 Metric: # quality change**
Buffer: 30−60 min: bola

Network profile: p4 Sample: t6 Metric: Avg−Bitrate
Buffer: 30−60   max: abr

Network profile: p4 Sample: t6 Metric: Inefficiency
Buffer: 30−60 min: elastic

Inefficiency

0.302826

0.33999

0.399686

0.242771

0.230054

abr   bb   bola   dy   elastic

Network profile: p4 Sample: t6 Metric: # quality change
Buffer: 30–60 min: dy

Network profile: p4 Sample: t7 Metric: Avg−Bitrate
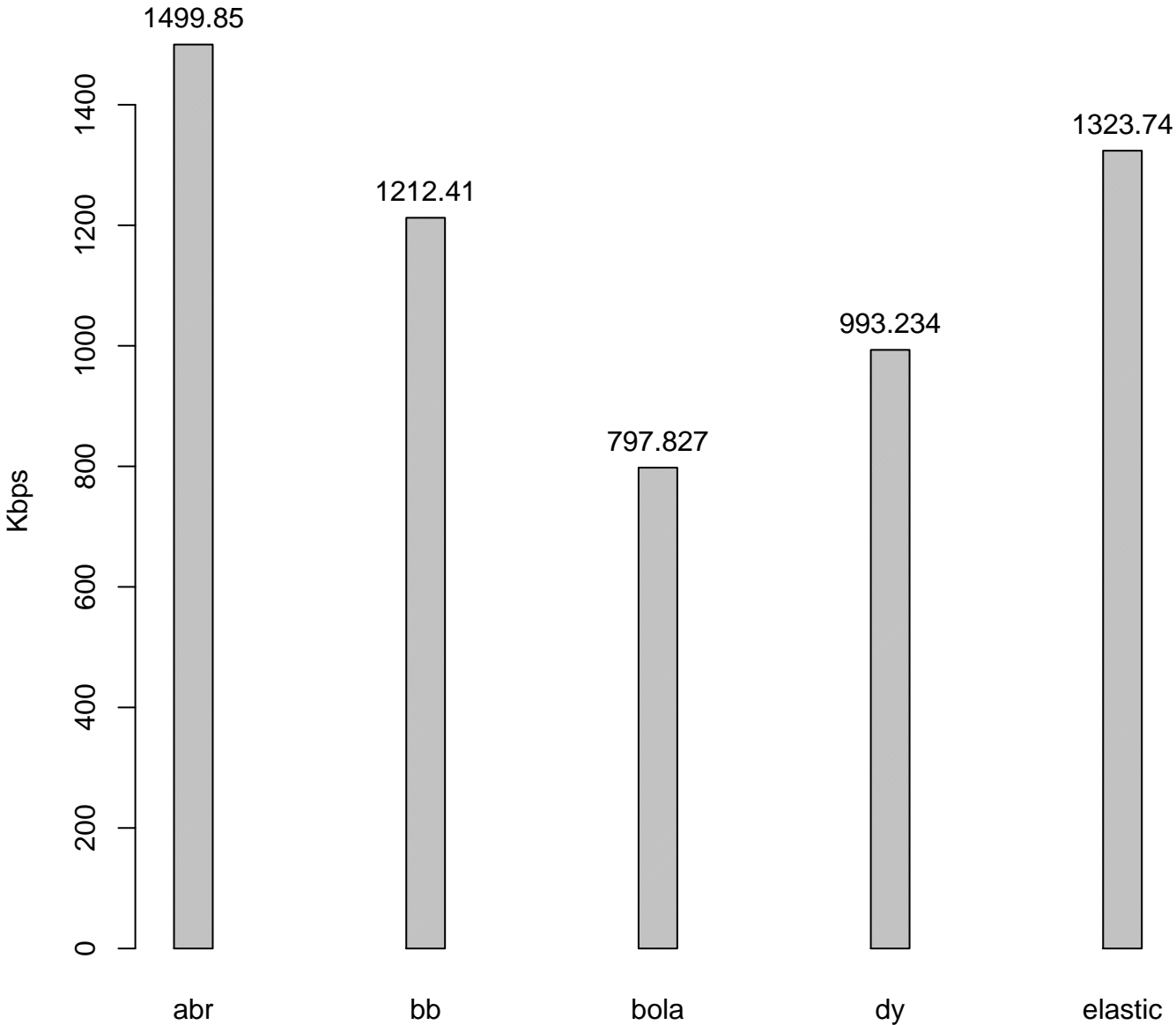**Buffer: 30−60 max: bb**

Network profile: p4 Sample: t7 Metric: Inefficiency
Buffer: 30−60 min: elastic

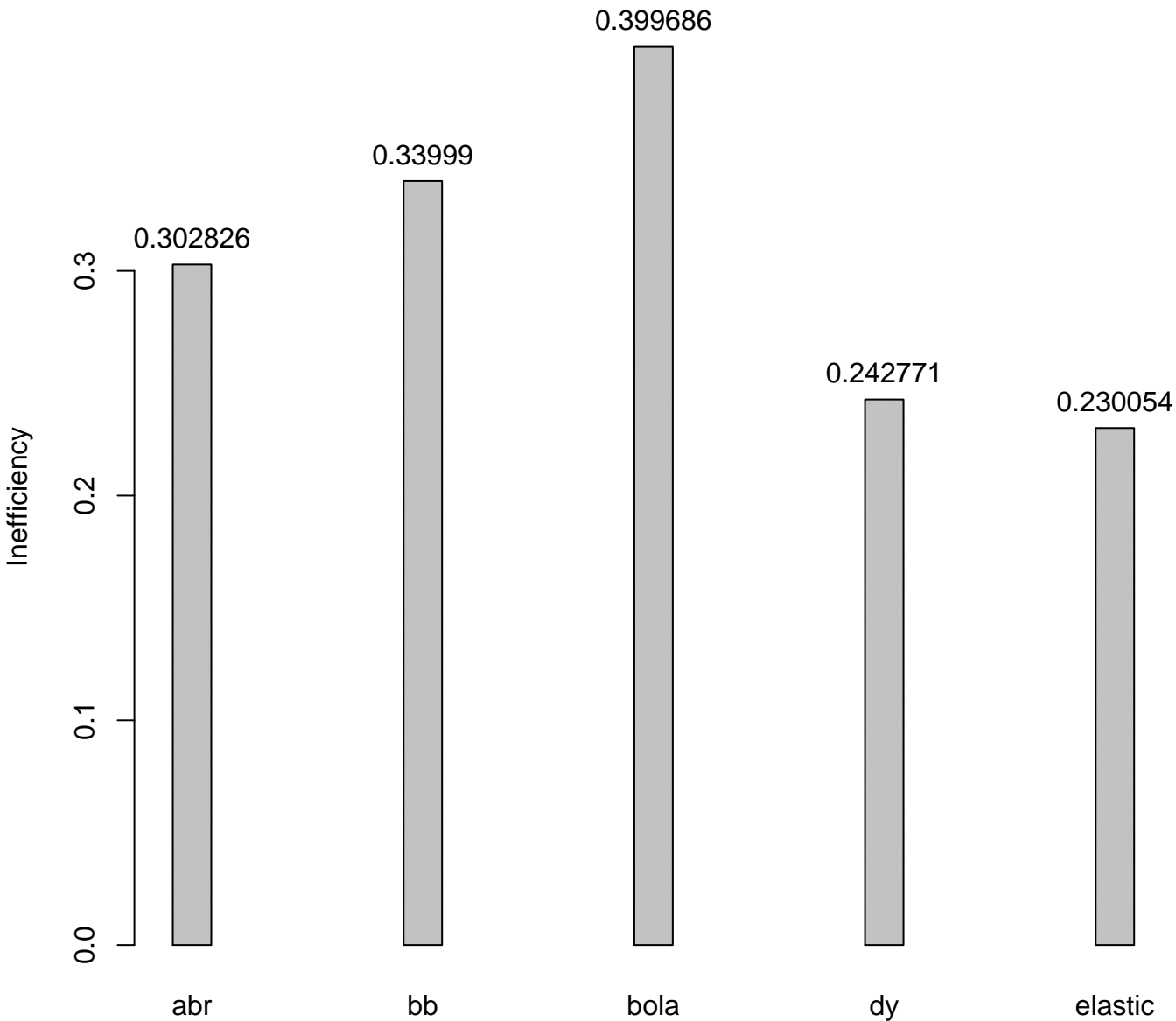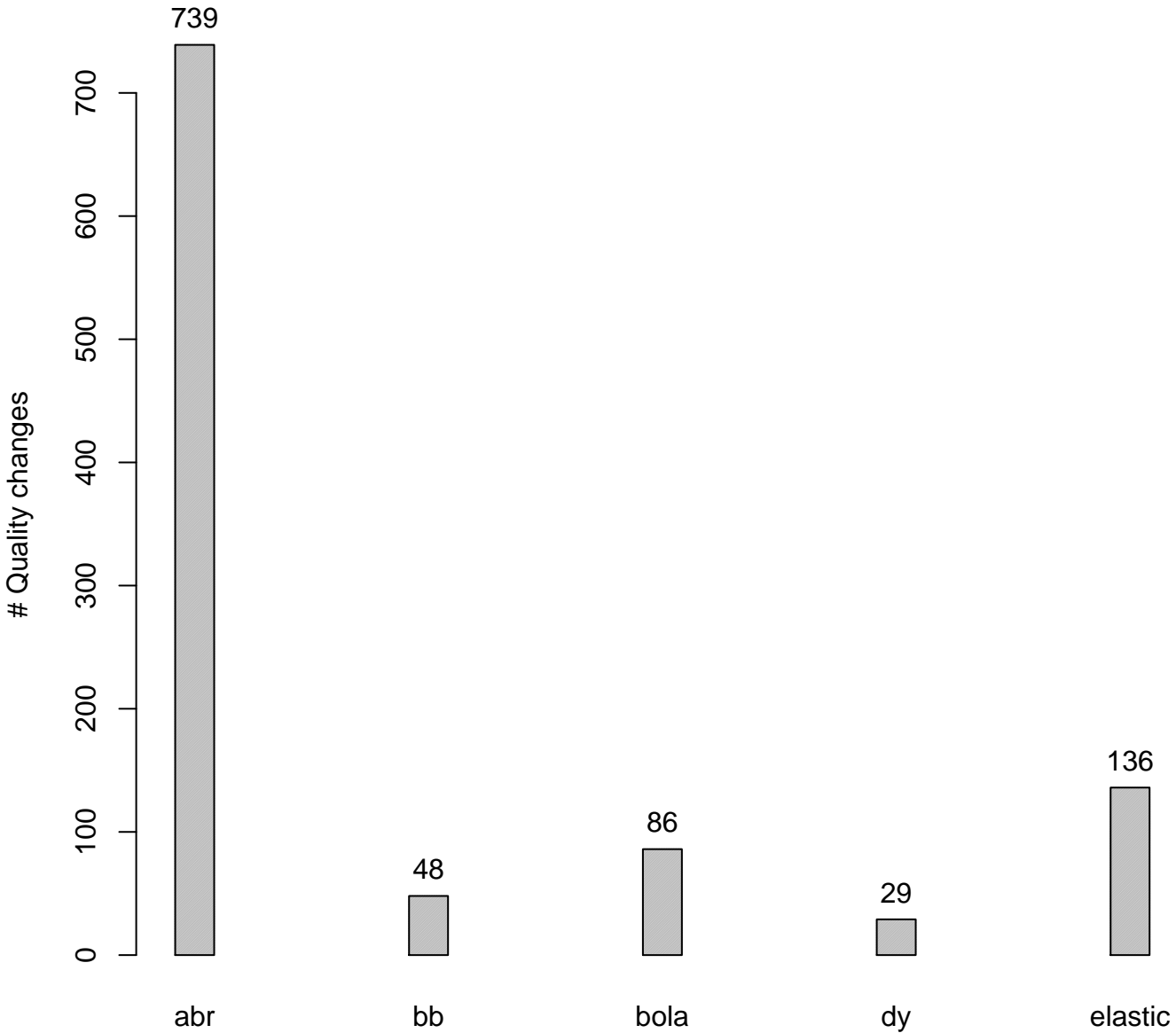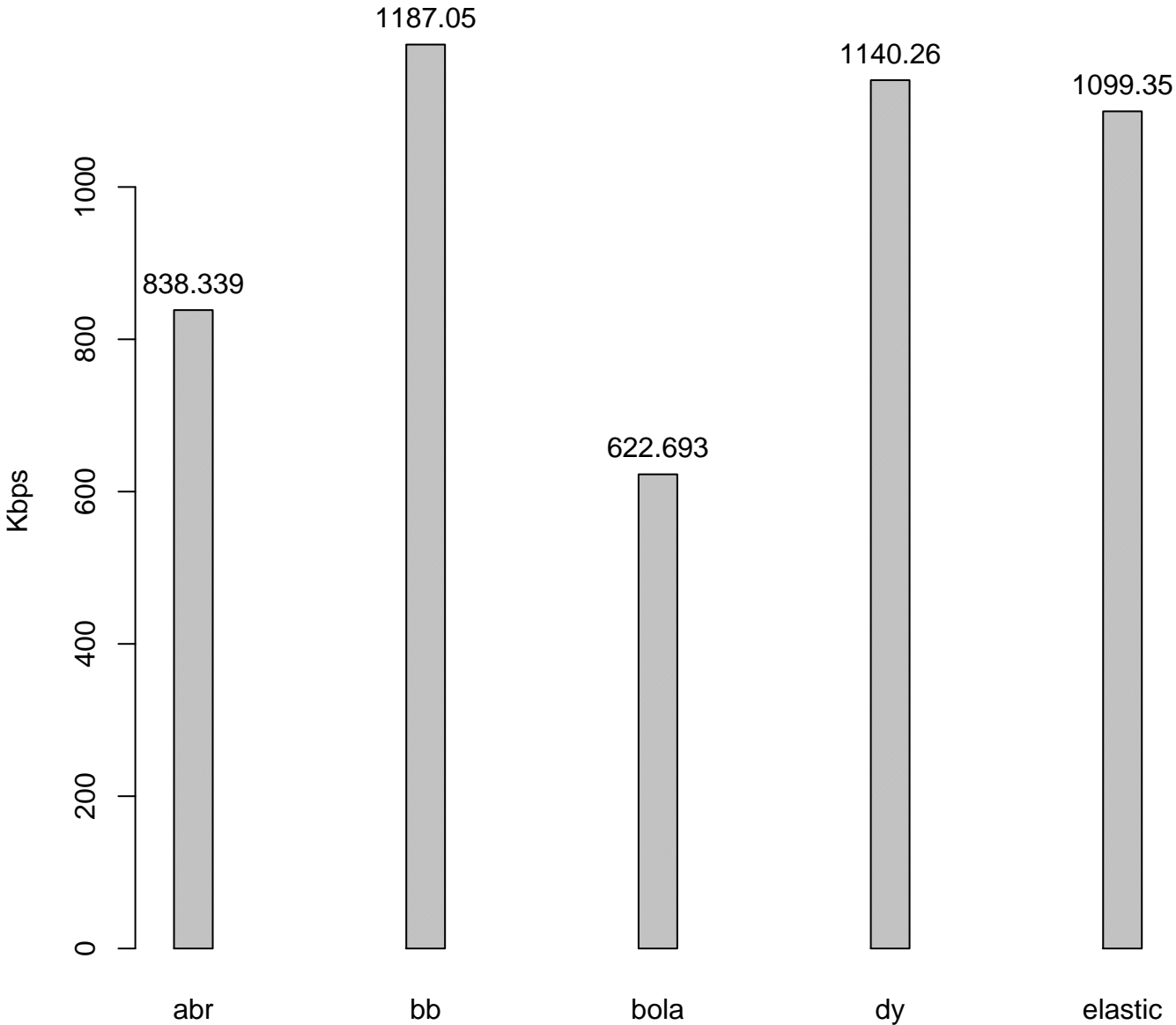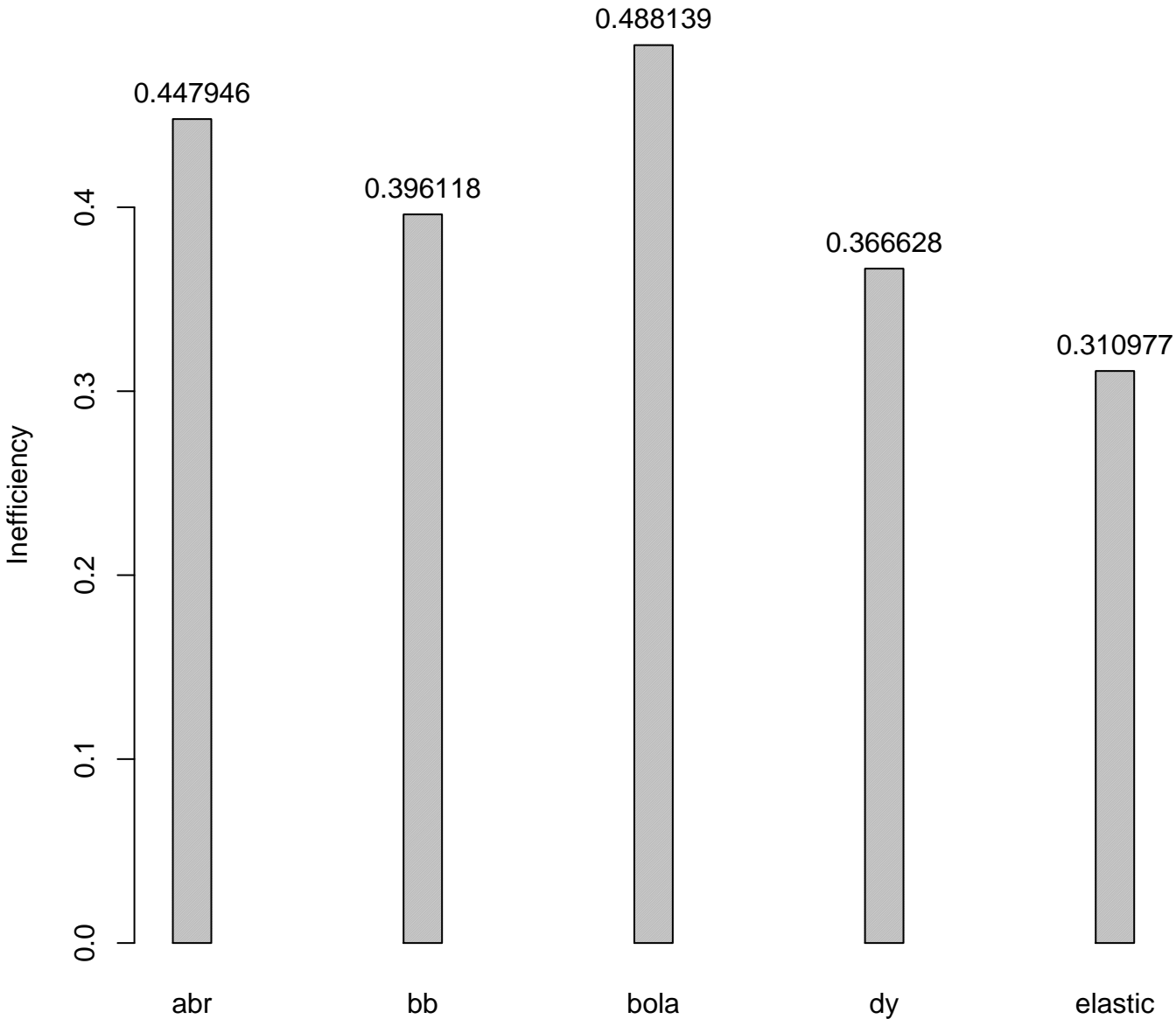**Network profile: p4 Sample: t7 Metric: # quality change**
Buffer: 30−60 min: bola

Quality changes

476

400

300

200

100

0

27

17

63

94

abr

bb

bola

dy

elastic