

## 4# graff jabłkowy

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **14**
- SRM **13.3**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Fermentables

| Type        | Name         | Amount        | Yield | EBC |
|-------------|--------------|---------------|-------|-----|
| Dry Extract | wheat malt   | 0.5 kg (4.5%) | 80 %  | 12  |
| Dry Extract | barley malt  | 0.5 kg (4.5%) | 80 %  | 12  |
| Adjunct     | sok jabłkowy | 10 kg (90.9%) | 20 %  | 15  |

### Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Cascade | 15 g   | 50 min | 6 %        |
| Aroma (end of boil) | Cascade | 15 g   | 10 min | 6 %        |
| Aroma (end of boil) | Cascade | 10 g   | 1 min  | 6 %        |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-33 | Ale  | Dry  | 11 g   | Fermentis  |

### Extras

| Type   | Name     | Amount | Use for | Time   |
|--------|----------|--------|---------|--------|
| Flavor | ksylitol | 180 g  | Boil    | 10 min |
| Flavor | laktoza  | 250 g  | Boil    | 10 min |