

apa

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **67**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **53 liter(s)**
- Trub loss **5 %**
- Size with trub loss **55.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **67.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **48 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|-----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 9.49 kg (79.1%) | 85 % | 7 |
| Grain | Weyermann - Pilsner Malt | 2.5 kg (20.9%) | 81 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 70 g | 60 min | 15.5 % |
| Boil | Sabro | 60 g | 10 min | 15.8 % |
| Boil | Amarillo | 50 g | 5 min | 9.5 % |
| Boil | sabro | 30 g | 5 min | 15.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 23 g | Safale |