

## PROFESSIONAL INFORMATION

### SCHEDULING STATUS

S4

#### 1. NAME OF THE MEDICINE

**EQUIBEN 25**, 25 mg/vial powder for concentrate for solution for infusion.

**EQUIBEN 100**, 100 mg/vial powder for concentrate for solution for infusion.

#### 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 25 mg/vial powder for concentrate for solution for infusion contains 25 mg bendamustine hydrochloride.

Each 100 mg/vial powder for concentrate for solution for infusion contains 100 mg bendamustine hydrochloride.

The total content of active ingredient in the vials provides 2,5 mg per mL of bendamustine hydrochloride when reconstituted.

Contains sugar (EQUIBEN 25 contains 42,5 mg mannitol per vial and EQUIBEN 100 contains 170 mg mannitol per vial).

For full list of excipients, see section 6.1.

#### 3. PHARMACEUTICAL FORM

Powder for concentrate for solution for infusion.

White to off white lyophilized powder or plug filled in amber vial with rubber stopper and Aluminium seal.

## 4. CLINICAL PARTICULARS

### 4.1 Therapeutic indications

- First-line treatment of chronic lymphocytic leukaemia (Binet stage B or C) in patients for whom fludarabine combination chemotherapy is not appropriate.
- First-line treatment of indolent CD 20 positive non-Hodgkin's lymphoma in combination with rituximab.
- Indolent non-Hodgkin's lymphomas as monotherapy in patients, who have progressed during or within 6 months following treatment with rituximab or a rituximab containing regimen.
- Front line treatment of multiple myeloma (Durie-Salmon stage II with progress or stage III) in combination with prednisone for patients older than 65 years who are not eligible for autologous stem cell transplantation and who have clinical neuropathy at time of diagnosis precluding the use of thalidomide or bortezomib containing treatment.

### 4.2 Posology and method of administration

#### Posology

Infusion must be administered under the supervision of a medical practitioner qualified and experienced in the use of chemotherapeutic medicines.

Poor bone marrow function is related to increased chemotherapy-induced haematological toxicity. Treatment should not be started if leukocyte and/or platelet values dropped to  $< 3 \times 10^9/L$  or  $< 75 \times 10^9/L$ , respectively (see section 4.3).

#### *Monotherapy for chronic lymphocytic leukaemia*

100 mg/m<sup>2</sup> body surface area EQUIBEN on days 1 and 2; every 4 weeks.

#### *Combination treatment for first-line indolent non-Hodgkin's lymphoma*

90 mg/m<sup>2</sup> body surface area EQUIBEN on days 1 and 2 in combination with 375 mg/m<sup>2</sup> body surface area rituximab as a slow i.v. infusion on day 1; every 4 weeks.

***Monotherapy for indolent non-Hodgkin's lymphomas refractory to rituximab***

120 mg/m<sup>2</sup> body surface area EQUIBEN on days 1 and 2; every 3 weeks.

***Multiple Myeloma***

120 – 150 mg/m<sup>2</sup> body surface area EQUIBEN on days 1 and 2, 60 mg/m<sup>2</sup> body surface area prednisone i.v. or orally on days 1 to 4; every 4 weeks.

Treatment should be terminated or delayed if leukocyte and/or platelet values dropped to  $\leq 3 \times 10^9/L$  or  $\leq 75 \times 10^9/L$ , respectively. Treatment can be continued after leukocyte values have increased to  $> 4 \times 10^9/L$  and platelet values to  $> 100 \times 10^9/L$ .

The leukocyte and platelet Nadir is reached, after 14 – 20 days with regeneration after 3 – 5 weeks. During therapy free intervals strict monitoring of the blood count is recommended (see section 4.4).

In case of non-haematological toxicity dose reductions have to be based on the worst CTC grades in the preceding cycle. A 50 % dose reduction is recommended in case of CTC grade 3 toxicity. An interruption of treatment is recommended in case of CTC grade 4 toxicity. If a patient requires a dose modification the individually calculated reduced dose must be given on day 1 and 2 of the respective treatment cycle.

For preparation and administration instructions (see section 6.6).

**Special populations*****Hepatic impairment***

On the basis of pharmacokinetic data, no dose adjustment is necessary in patients with mild hepatic impairment (serum bilirubin  $< 34,2 \mu\text{mol/L}$  (2,0 mg/dL)).

A 30 % dose reduction is recommended in patients with moderate hepatic impairment (serum bilirubin (34,2  $\mu\text{mol/L}$  – 51,3  $\mu\text{mol/L}$  (2 – 3,0 mg/dL)).

No data is available in patients with severe hepatic impairment (serum bilirubin values of > 51,3 µmol/L (3,0 mg/dL)).

### ***Renal impairment***

On the basis of pharmacokinetic data, no dose adjustment is necessary in patients with a creatinine clearance of > 10 mL/min. Experience in patients with severe renal impairment is limited.

### ***Elderly patients***

There is no evidence that dose adjustments are necessary in elderly patients (see section 5.2).

### **Paediatric population**

There is no experience in children and adolescents with EQUIBEN.

### **Method of administration**

For intravenous infusion over 30 to 60 minutes.

Instructions for use (see section 6.6).

### **4.3 Contraindications**

- Hypersensitivity to the bendamustine hydrochloride or to any of the excipients listed in section 6.1.
- Pregnancy and lactation (see section 4.6).
- Severe hepatic impairment (serum bilirubin > 3,0 mg/dL).
- Jaundice.
- Severe bone marrow suppression and severe blood count alterations (leukocyte and/or platelet values dropped to < 3 x 10<sup>9</sup>/L or < 75 x 10<sup>9</sup>/L, respectively).
- Major surgery less than 30 days before start of treatment.
- Infections, especially involving leukocytopenia.
- Yellow fever vaccination or any other live (attenuated) vaccination.

- Congenital QT prolongation.
- Concomitant medicines causing QT prolongation.

#### 4.4 Special warnings and precautions for use

##### *Myelosuppression*

Patients treated with EQUIBEN experience myelosuppression. Treatment-related myelosuppression, leukocytes, platelets, haemoglobin, and neutrophils must be monitored at least weekly. Prior to the initiation of the next cycle of therapy, the following parameters are recommended: Leukocyte and/or platelet values  $> 4 \times 10^9/L$  or  $> 100 \times 10^9/L$ , respectively.

##### *Infections*

Serious and fatal infections have occurred with bendamustine, including bacterial (sepsis, pneumonia) and opportunistic infections such as *Pneumocystis jirovecii* pneumonia (PJP), varicella zoster virus (VZV) and cytomegalovirus (CMV). Cases of progressive multifocal leukoencephalopathy (PML) including fatal ones have been reported following the use of bendamustine mainly in combination with rituximab or obinutuzumab. Treatment with EQUIBEN may cause prolonged lymphocytopenia ( $< 600/\mu L$ ) and low CD4-positive T-cell (T-helper cell) counts ( $< 200/\mu L$ ) for at least 7 – 9 months after the completion of treatment. Lymphocytopenia and CD4-positive T-cell depletion is more pronounced when EQUIBEN is combined with rituximab patients with lymphopenia and low CD4-positive T-cell count following treatment with EQUIBEN are more susceptible to (opportunistic) infections.

In case of low CD4-positive T-cell counts ( $< 200/\mu L$ ) *Pneumocystis jirovecii* pneumonia (PJP) prophylaxis should be considered. All patients should be monitored for respiratory signs and symptoms throughout treatment. Patients should be advised to report new signs of infection, including fever or respiratory symptoms promptly. Discontinuation of EQUIBEN should be considered if there are signs of (opportunistic) infections.

Consider PML in the differential diagnosis in patients with new or worsening neurological, cognitive, or behavioural signs or symptoms. If PML is suspected, then appropriate diagnostic evaluations should be undertaken, and treatment with EQUIBEN suspended until PML is excluded.

### ***Hepatitis B reactivation***

Reactivation of hepatitis B in patients who are chronic carriers of this virus has occurred after these patients received bendamustine. Some cases resulted in acute hepatic failure or a fatal outcome. Patients should be tested for HBV infection before initiating treatment with EQUIBEN. Experts in liver disease and in the treatment of hepatitis B should be consulted before treatment is initiated in patients with positive hepatitis B tests (including those with active disease) and for patients who test positive for HBV infection during treatment. Carriers of HBV who require treatment with EQUIBEN should be closely monitored for signs and symptoms of active HBV infection throughout therapy and for several months following termination of therapy (see section 4.8).

### ***Skin reactions***

A number of skin reactions have been reported. These events have included rash, severe cutaneous reactions, and bullous exanthema. Cases of Stevens – Johnson syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) and Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS), some fatal, have been reported with the use of bendamustine. Patients should be advised of the signs and symptoms of these reactions by their prescribers and should be told to seek medical attention immediately if they develop these symptoms. Some events occurred when bendamustine was given in combination with other anticancer medicines, so the precise relationship is uncertain. When skin reactions occur, they may be progressive and increase in severity with further treatment. If skin reactions are progressive, EQUIBEN should be withheld or discontinued. For severe skin reactions with suspected relationship to EQUIBEN, treatment should be discontinued.

### ***Cardiac disorders***

During treatment with EQUIBEN the concentration of potassium in the blood of patients with cardiac disorders must be closely monitored and potassium supplement must be given when potassium levels are  $< 3,5$  mEq/L (3,5 mmol/L) and ECG measurement must be performed.

Fatal cases of myocardial infarction and cardiac failure have been reported with bendamustine treatment. Patients with concurrent or history of cardiac disease should be observed closely.

***Nausea, vomiting***

An antiemetic should be given for the symptomatic treatment of nausea and vomiting.

***Tumour lysis syndrome***

Tumour lysis syndrome (TLS) associated with bendamustine as in EQUIBEN treatment has been reported in patients in clinical trials. The onset tends to be within 48 hours of the first dose of EQUIBEN and, without intervention, may lead to acute renal failure and death. Preventive measures such as adequate hydration, close monitoring of blood chemistry, particularly potassium and uric acid levels and the use of hypouricemic medicines (allopurinol and rasburicase) should be considered prior to therapy. There have been a few cases of Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis reported when bendamustine and allopurinol were administered concomitantly.

***Anaphylaxis***

Infusion reactions to bendamustine as in EQUIBEN have occurred commonly in clinical trials. Symptoms are generally mild and include fever, chills, pruritus, and rash. In rare instances severe anaphylactic and anaphylactoid reactions have occurred. Patients must be asked about symptoms suggestive of infusion reactions after their first cycle of therapy. Measures to prevent severe reactions, including antihistamines, antipyretics and corticosteroids must be considered in subsequent cycles in patients who have previously experienced infusion reactions. In patients who experienced Grade 3 or worse allergic-type reactions, EQUIBEN should be discontinued.

***Non-melanoma skin cancer***

In clinical studies, an increased risk for non-melanoma skin cancers (basal cell carcinoma and squamous cell carcinoma) has been observed in patients treated with bendamustine containing therapies. Periodic skin examination is recommended for all patients, particularly those with risk factors for skin cancer.

***Contraception***

EQUIBEN is teratogenic and mutagenic.

Women should not become pregnant during treatment. Male patients should not father a child during and up to 6

months after treatment. They should seek advice about sperm conservation prior to treatment with EQUIBEN because of possible irreversible infertility.

### ***Extravasation***

An extravasal injection should be stopped immediately. The needle should be removed after a short aspiration. Thereafter the affected area of tissue should be cooled. The arm should be elevated. Additional treatments like the use of corticosteroids are not of clear benefit.

There have been reports of necrosis after accidental extra-vascular administration and toxic epidermal necrosis, tumour lysis syndrome, and anaphylaxis.

There are reports of secondary tumours, including myelodysplastic syndrome, myeloproliferative disorders, acute myeloid leukaemia, and bronchial carcinoma.

### **4.5 Interaction with other medicines and other forms of interaction**

No *in vivo* interaction studies have been performed.

When EQUIBEN is combined with myelosuppressive medicines, the effect of EQUIBEN and/or the co administered medicinal products on the bone marrow may be potentiated. Any treatment reducing the patient's performance status or impairing bone marrow function can increase the toxicity of EQUIBEN.

Combination of EQUIBEN with ciclosporin or tacrolimus may result in excessive immunosuppression with risk of lymphoproliferation.

Cytostatics can reduce antibody formation following live-virus vaccination and increase the risk of infection which may lead to fatal outcome. This risk is increased in patients who are already immunosuppressed by their underlying disease.

EQUIBEN metabolism involves cytochrome P450 (CYP) 1A2 isoenzyme (see section 5.2). Therefore, the potential for interaction with CYP1A2 inhibitors such as fluvoxamine, ciprofloxacin, acyclovir and cimetidine exist.

### **Paediatric population**

Interaction studies have only been performed in adults.

## **4.6 Fertility, pregnancy and lactation**

### ***Women of childbearing potential / Contraception in males and females***

Due to the genotoxic potential of bendamustine, women of childbearing potential must use effective methods of contraception before and during EQUIBEN therapy, and for up to 6 months following completion of treatment.

Men being treated with EQUIBEN are advised to use effective contraceptive measures and not to father a child during and for up to 6 months following cessation of treatment.

### ***Pregnancy***

There are insufficient data from the use of EQUIBEN in pregnant women. In non-clinical studies bendamustine was embryo-/feto-lethal, teratogenic and genotoxic. Therefore, EQUIBEN is contraindicated during pregnancy (see section 4.3).

### ***Breastfeeding***

It is not known whether EQUIBEN passes into the breast milk. Treatment with EQUIBEN is therefore contraindicated during breastfeeding (see section 4.3). Mothers on EQUIBEN must not breastfeed their babies.

### ***Fertility***

Advice on conservation of sperm should be sought prior to treatment because there is a possibility of irreversible infertility in males due to therapy with EQUIBEN.

#### 4.7 Effects on ability to drive and use machines

EQUIBEN has major influence on the ability to drive and use machines. Ataxia, peripheral neuropathy, and somnolence have been reported during treatment with bendamustine (see section 4.8). Patients should be instructed that if they experience these symptoms, they should avoid potentially hazardous tasks such as driving and using machines.

#### 4.8 Undesirable effects

##### a. Summary of the safety profile

The most frequent side effects with EQUIBEN are haematological adverse reactions (leukopenia, thrombocytopenia), dermatologic toxicities (allergic reactions), constitutional symptoms (fever), gastrointestinal symptoms (nausea, vomiting).

##### b. Tabulated list of adverse reactions

MedDRA system organ class	Frequent	Less frequent	Frequency not known
<b>Infections and infestations</b>	Infection NOS including opportunistic infection (e.g., herpes zoster, cytomegalovirus, hepatitis B)	Pneumocystis jirovecii pneumonia, sepsis, septicaemia, pneumonia primary atypical, tuberculosis	
<b>Neoplasm benign, malignant, and unspecified (including cysts and polyp)</b>	Tumour lysis syndrome	Myelodysplastic syndrome, acute myeloid leukaemia	
<b>Blood and lymphatic system disorders</b>	Leukopenia (not otherwise specified), thrombocytopenia, lymphopenia, anaemia,	Pancytopenia, bone marrow failure, haemolysis	

	neutropenia, haemorrhage		
<b>Immune system disorders</b>	Hypersensitivity (not otherwise specified)	Anaphylactic reaction, anaphylactoid reaction, anaphylactic shock	
<b>Nervous system disorders</b>	Headache, insomnia, dizziness	Somnolence, aphonia, dysgeusia, paraesthesia, peripheral sensory neuropathy, anticholinergic syndrome, neurological disorders, ataxia, encephalitis	
<b>Cardiac disorders</b>	Cardiac dysfunction, such as tachycardia, palpitations, angina pectoris, dysrhythmia, QT prolongation	Pericardial effusion, myocardial infarction, cardiac failure	Atrial fibrillation
<b>Vascular disorders</b>	Hypotension, hypertension	Acute circulatory failure, phlebitis	
<b>Respiratory, thoracic, and mediastinal disorders</b>	Pulmonary dysfunction	Pulmonary fibrosis	Pneumonitis, pulmonary alveolar haemorrhage
<b>Gastrointestinal disorders</b>	Nausea, vomiting, diarrhoea, constipation, stomatitis	Haemorrhagic oesophagitis, gastrointestinal haemorrhage	
<b>Hepato-biliary disorder</b>			Hepatic failure
<b>Skin and subcutaneous</b>	Alopecia, skin disorders	Erythema, dermatitis,	Stevens –Johnson

<b>tissue disorders</b>	(not otherwise specified), urticaria	pruritus, maculopapular rash, hyperhidrosis	syndrome, Toxic Epidermal Necrolysis (TEN), Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)*
<b>Renal and urinary disorders</b>			Renal failure
<b>Reproductive system and breast disorders</b>	Amenorrhea	Infertility	
<b>General disorders and administration site conditions</b>	Mucosal inflammation, fatigue, pyrexia, pain, chills, dehydration, anorexia	Multi organ failure	
<b>Investigations</b>	Haemoglobin decrease, creatinine increase, urea increase, AST increase, ALT increase, alkaline phosphatase increase, bilirubin increase, hypokalaemia		

\* combination therapy with rituximab

NOS: Not otherwise specified.

### c. Description of selected adverse reactions

There have been isolated reports of necrosis after accidental extra-vascular administration and tumour lysis syndrome, and anaphylaxis.

The risk of myelodysplastic syndrome and acute myeloid leukaemias is increased in patients treated with alkylating medicines (including bendamustine). The secondary malignancy may develop several years after chemotherapy has been discontinued.

### **Reporting of suspected adverse reactions**

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Healthcare providers are asked to report any suspected adverse reactions to SAHPRA via the Med Safety APP (Medsafety X SAHPRA) and eReporting platform (who-umc.org) found on the SAHPRA website.

### **4.9 Overdose**

After application of a 30 min infusion of bendamustine once every 3 weeks the maximum tolerated dose (MTD) was 280 mg/m<sup>2</sup>. Cardiac events of CTC grade 2 which were compatible with ischaemic ECG changes occurred which were regarded as dose limiting.

In a subsequent study with a 30 min infusion of bendamustine at day 1 and 2 every 3 weeks the MTD was found to be 180 mg/m<sup>2</sup>. The dose limiting toxicity was grade 4, thrombocytopenia. Cardiac toxicity was not dose limiting with this schedule.

### ***Counter measures***

There is no specific antidote. Bone marrow transplantation and transfusions (platelets, concentrated erythrocytes) may be made, or haematological growth factors may be given as effective countermeasures to control haematological side effects.

EQUIBEN and its metabolites are dialysable to a small extent.

## **5. PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Category and class: A. 26 Cytostatic agents

Pharmacotherapeutic group: Antineoplastic agents, alkylating agents.

ATC code: L01AA09

### ***Mechanism of action***

Bendamustine hydrochloride is an alkylating antitumour medicine with unique activity. The antineoplastic and cytotoxic effect of bendamustine hydrochloride is based essentially on a cross-linking of DNA single and double strands by alkylation. As a result, DNA matrix functions and DNA synthesis and repair are impaired.

The antitumour effect of bendamustine hydrochloride has been demonstrated by several *in vitro* studies in different human tumour cell lines (breast cancer, non-small cell and small cell lung cancer, ovarian carcinoma, and different leukaemia) and *in vivo* in different experimental tumour models with tumours of mouse, rat, and human origin (melanoma, breast cancer, sarcoma, lymphoma, leukaemia, and small cell lung cancer).

Bendamustine hydrochloride showed an activity profile in human tumour cell lines different to that of other alkylating medicines. The active substance revealed no or very low cross-resistance in human tumour cell lines with different resistance mechanisms at least in part due to a comparatively persistent DNA interaction. Additionally, it was shown in clinical studies that there is no complete cross-resistance of bendamustine with anthracyclines, alkylating medicines, or rituximab. However, the number of assessed patients is small.

## **5.2 Pharmacokinetic properties**

### **Distribution**

The elimination half-life  $t_{1/2B}$  after 30 min i.v. infusion of 120 mg/m<sup>2</sup> area to subjects was 28,2 minutes.

Following 30 min i.v. infusion the central volume of distribution was 19,3 litre. Under steady-state conditions following i.v. bolus injection the volume of distribution was 15,8 – 20,5 L.

More than 95 % of the substance is bound to plasma proteins (primarily albumin).

### **Biotransformation**

A major route of clearance of bendamustine is the hydrolysis to monohydroxy- and dihydroxybendamustine. Formation of N-desmethyl-bendamustine and gamma-hydroxy bendamustine by hepatic metabolism involves

cytochrome P450 (CYP) 1A2 isoenzyme. Another major route of bendamustine metabolism involves conjugation with glutathione.

*In vitro* bendamustine does not inhibit CYP 1A4, CYP 2C9/10, CYP 2D6, CYP 2E1 and CYP 3A4.

### **Elimination**

The mean total clearance after 30 min i.v. infusion of 120 mg/m<sup>2</sup> body surface area to subjects was 639,4 mL/minute. About 20 % of the administered dose was recovered in urine within 24 hours. Amounts excreted in urine were in the order monohydroxy-bendamustine > bendamustine > dihydroxy-bendamustine > oxidised metabolite > N-desmethyl bendamustine. In the bile, primarily polar metabolites are eliminated.

### **Special populations**

#### *Hepatic impairment*

In patients with 30 to 70 % tumour infiltration of the liver and mild hepatic impairment (serum bilirubin < 34,2 µmol/L (2,0 mg/dL)) the pharmacokinetic behaviour was not changed.

There was no significant difference to patients with normal liver and kidney function with respect to C<sub>max</sub>, t<sub>max</sub>, AUC, t<sub>1/2β</sub>, volume of distribution and clearance. AUC and total body clearance of bendamustine correlate inversely with serum bilirubin.

#### *Renal impairment*

In patients with creatinine clearance > 10 mL/min including dialysis dependent patients, no significant difference to patients with normal liver and kidney function was observed with respect to C<sub>max</sub>, t<sub>max</sub>, AUC, t<sub>1/2β</sub>, volume of distribution and clearance.

#### *Elderly subjects*

Subjects up to 84 years of age were included in pharmacokinetic studies. Higher age does not influence the pharmacokinetics of bendamustine.

## 6. PHARMACEUTICAL PARTICULARS

### 6.1 List of excipients

Mannitol (E421)

### 6.2 Incompatibilities

EQUIBEN must not be mixed with other medicines except those mentioned in section 6.6.

### 6.3 Shelf life

*Unopened vial:*

2 years.

*Reconstituted and diluted solution:*

The powder should be reconstituted immediately after opening of the vial.

The reconstituted concentrate should be diluted immediately with 0,9 % sodium chloride solution.

*Solution for infusion*

After reconstitution and dilution, chemical and physical stability has been demonstrated for 3,5 hours at 25 °C/ 60% RH and 2 days at 2 °C to 8 °C in polyethylene bags.

From a microbiological point of view, the solution should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the user.

### 6.4 Special precautions for storage

Store at or below 25 °C.

EQUIBEN does not require any special storage conditions.

For storage conditions after reconstitution and dilution of EQUIBEN, see section 6.3.

### 6.5 Nature and contents of container

EQUIBEN 25 is available in 20 mL/20 mm Amber Flat Bottom tubular type-1 glass vial with 20 mm Grey bromo butyl double slotted Lyo stopper and 20 mm Aluminium Flip off Red colour seal.

The 20 mL vial contains 25 mg bendamustine hydrochloride and are supplied in packs of 1, 5, 10 and 20 vials per outer carton.

EQUIBEN 100 is available in 50 mL/20 mm Amber Moulded type-1 glass vial with 20 mm Grey bromo butyl double slotted Lyo stopper and 20 mm Aluminium Flip off Red colour seal.

The 50 mL vial contains 100 mg bendamustine hydrochloride and are supplied in packs of 1 and 5 vials per outer carton.

Not all pack sizes may be marketed.

## 6.6 Special precautions for disposal and other handling

When handling EQUIBEN, inhalation, skin contact or contact with mucous membranes should be avoided (wear gloves and protective clothes). Contaminated body parts should be carefully rinsed with water and soap, the eye should be rinsed with physiological saline solution. If possible, it is recommended to work on special safety workbenches (laminar flow) with liquid impermeable, absorbing disposable foil. Pregnant personnel should be excluded from handling cytostatics.

The powder for concentrate for solution for infusion has to be reconstituted with water for injection, diluted with sodium chloride 9 mg/mL (0,9 %) solution for injection and then administered by intravenous infusion. Aseptic technique is to be used.

### 1. Reconstitution

- Reconstitute each vial of EQUIBEN containing 25 mg bendamustine hydrochloride in 10 mL water for injection by shaking.
- Reconstitute each vial of EQUIBEN containing 100 mg bendamustine hydrochloride in 40 mL water for injection by shaking.

The reconstituted concentrate contains 2,5 mg bendamustine hydrochloride per mL and appears as a clear colourless

to slightly yellow solution.

## **2. Dilution**

As soon as a clear solution is obtained (usually after 5 – 10 minutes) dilute the total recommended dose of EQUIBEN immediately with 0,9 % NaCl solution to produce a final volume of about 500 mL.

EQUIBEN must be diluted with 0,9 % NaCl solution and not with any other injectable solution.

## **3. Administration**

The solution is administered by intravenous infusion over 30 – 60 min.

The vials are for single use only.

Any unused product or waste material should be disposed of in accordance with local requirements.

## **7. HOLDER OF CERTIFICATE OF REGISTRATION**

Equity Pharmaceuticals (Pty) Ltd.

100 Sovereign Drive

Route 21 Corporate Park

Nellmapius Drive, Irene

Pretoria

Tel no.: +27 (012) 345 1747

## **8. REGISTRATION NUMBER(S)**

EQUIBEN 25: 56/26/0822

EQUIBEN 100: 56/26/0823

## **9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

07 February 2023

## **10. DATE OF REVISION OF THE TEXT**

24 July 2025