t32_filter_0 (TMViJoYE4Hni7QvBeLh6QMWSzQeRMSdRyFG)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v10\_lattices : \iota \Rightarrow o$ be given. Let $l3\_lattices : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_filter\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v10\_lattices\ X0) \wedge (l3\_lattices\ X0))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (k5\_filter\_0\ X0\ X1\ X2 = ReplSep2\ (toset\ (\lambda X3 : \iota . m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)))\ (\lambda X3 : \iota . toset\ (\lambda X4 : \iota . m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)))\ (\lambda X3 : \iota . \lambda X4 : \iota . (X3 \in X1) \wedge (X4 \in X2))\ (\lambda X3 : \iota . \lambda X4 : \iota . k4\_lattices\ X0\ X3\ X4))))) \tag{1}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v10\_lattices\ X0) \wedge (l3\_lattices\ X0))) \Rightarrow (\forall X1 . \forall X2 . ((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (\forall X3 . ((\neg v1\_xboole\_0\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (\neg (X1 \in k5\_filter\_0\ X0\ X2\ X3) \wedge (\forall X4 . (m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X5 . (m1\_subset\_1\ X5\ (u1\_struct\_0\ X0)) \Rightarrow (\neg (X1 = k4\_lattices\ X0\ X4\ X5) \wedge ((X4 \in X2) \wedge (X5 \in X3)))))))))$$